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September 1987 / No. 2

GOD, HUMANITY AND NATURE IN RELATION TO JUSTICE AND PEACE

by

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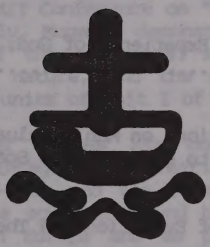

WORLD COUNCIL OF CHURCHES

Programme Unit on Faith and Witness
Sub-unit on Church and Society

GOD HUMANITY AND NATURE IN RELATION TO JUSTICE AND PEACE

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FOREWORD

Dr. Jesse N.K. Mugambi, Head of the Department of Religious Studies at Nairobi University, has made an important contribution to the post-Vancouver ecumenical debate. In what follows he explains, from his East African perspective, how our understanding of the relationship between God, Humanity and Nature, interpreted from within the context of distinctively African concepts such as "vital force", time and relation, may be related to justice and peace, thus becoming part of the current post-Vancouver theme "Justice, Peace and the Integrity of Creation".

Mugambi's arguments are set out in seven chapters, the first of which establishes the relationship between God, humanity and nature within the broader spectrum of the three major historic thrusts of the ecumenical movement, Life and Work, Faith and Order and the International Missionary Council (World Mission and Evangelism since 1961). It would be interesting to speculate as to the extent to which the theme of God, humanity and nature was shaped by William Temple's endeavours in the 1920's and subsequently (and also the relationship between Temple's philosophical framework and the process thought which occupied the next decade and has been more recently taken up by Birch, Cobb and others). Mugambi, however, charts the journey between successive WCC assemblies, attributing much significance to the meeting of the Church & Society Working Committee in May 1976 (following the Fifth Assembly), with its insistence on the primacy of justice and ecology.

Proceeding via the 1979 MIT Conference on "Faith, Science and the Future" and the Vancouver Assembly, Mugambi demonstrates the manner in which the three primary thrusts of the ecumenical movement have each shaped the theme God, humanity and nature, and the reasons, therefore, why it is relevant to all four sub-units of Unit I of the WCC.

Mugambi's second chapter echoes his concern that the total theme "Justice, Peace and the Integrity of Creation" needs to be developed as a whole by each unit, sub-unit and the Commission (Working Committee) of the WCC. Summarising the ecumenical and biblical contexts, and a brief history of the theme in Europe and as part of the modern ecumenical agenda, he considers new orientations relating to Society, Technology and the Environment (which is to be a sub-theme of the forthcoming Working Committee in Glion, September 1987).

Chapter three is the most fascinating section of the book and contains some important insights into the African experience of God, humanity and nature. An African contemplating an object is not satisfied with European categories or abstractions based on it - object and subject must ultimately be intimately related. Mugambi quotes Placide Tempels whose studies of the Baluba had suggested that "vital force" is the fundamental concept of Bantu philosophy. John Mbiti, however, claimed that the African concept of time, in which there is only a past, present and no future, is basic to African thought. Mugambi recognises the importance of both vital force and time, but argues that they are less significant

than the African concern for relation:

> All Africans in traditional life believe that nothing can be well with them if a good relationship is not maintained between them and all the powers which are perceived in the environment. These include God, fellow men, ancestors, established institutions, and ritual animals, plants, non-living objects and special places. If the relationship is broken, then it must be restored before the situation can return to normal.

Thus the African religious and philosophical heritage is based on physical experimental perception rather than on mystical contemplation:

> While the Graeco-Roman religious and philosophical tradition gives a primary position to such metaphysical questions as the nature of God, Man and the Universe, and expresses philosophical doubts as to the existence of these three, Africans acknowledge what they experience, and the complicated problems posed in that experience lead them to ask such questions as what they may do to remain in good, healthy or prosperous relationships with the powers which they experience in their environment. The African experience of God is directly involved in this concern, rather than in concepts such as being, vital force, universal force, or the concept of time. Relation is in deed, thought and expression, a fundamental concern of African peoples in their religion, philosophy and social organisation.

This chapter is central to Mugambi's thesis, and the reference notes are correspondingly detailed. The remaining chapters reflect on the human valuation of matter in relation to duration and space (chapter four contains some interesting insights into parallels between Hebrew and Swahili Bantu measurements of duration), evolution and creation (chapter five), miracles and scientific evidence (chapter six), and a critique of Euro-Hellenistic Epistemology (chapter seven), which returns to the central problem of subjectivity and objectivity. Mugambi concludes by quoting with approval John Habgood's cautionary reminder in Religion and Science (Mills and Boon, London, 1964) that neither theology, nor philosophy, nor sociology ought to claim a monopoly of solutions to the human quest for reliable knowledge:

> No matter how much Christians may stress the objective, historical aspects of their faith, and claim their faith is the faith of an historical community, there remains a large personal element in it. To know God is not to add an extra card labelled "God" to our mental card index, it is to become a changed person. To a lesser degree, to learn science is to become a changed person also. But whereas in science the process of change is largely unconscious and often unrecognised, in religion it is paramount (p.132).

At a time, when both in the West and in parts of the rest of the world where the forces of secularisation have uprooted family and community life, Jesse Mugambi's manuscript with its emphasis on good, healthy relationships with the powers latent in our environment comes as a salutory reminder that our priorities may need rethinking. We wish to express our gratitude to him for this important and original contribution from an African perspective to the contemporary ecumenical debate.

David Gosling

GOD HUMANITY AND NATURE IN RELATION TO JUSTICE AND PEACE

AUTHOR'S PREFACE TO THE WCC EDITION

The WCC edition of this book has been published as part of the work of the Church and Society Sub-Unit in follow-up to the mandate of the Sixth WCC Assembly, Vancouver, 1983. The Theme "Justice, Peace and the Integrity of Creation" was adopted at Vancouver, replacing the earlier one on "Justice, Participation and Sutainability". The concern for the "Integrity of Creation" led the Church and Society Sub-Unit to re-open discussion on the relationship between God, Humanity and Nature. This topic had been studied to some extent by the Commission on Faith and Order in the 1960's, but the Conference on Faith, Science and the Future (MIT 1979) indicated that a convergence was needed between the insights arising from Philosophy, theology, empirical science and applied technology.

There is consensus within the Church and Society Sub-Unit, that the various "Constituencies" of the modern ecumenical movement ought to listen to, and learn from one another, both within the WCC programme structure, and amongst the member churches all over the world. This book is intended as a contribution in this reciprocal sharing, with the hope that responses will be forthcoming to help us all to grow together in faith and practice.

The author presupposes an African cultural setting, an ecumenical context, and the contemporary Kenyan context. It is hoped that this book will be useful in the teaching of ecumenics, and also in promoting further discussion on the open-ended questions with which it deals.

I wish to express my appreciation to the many friends and colleagues within the global ecumenical movement, especially those in the WCC Programme Unit I who have mutually shared their ideas with me during the last fifteen years.

For the publication of this edition I would like to thank especially Dr. David Gosling, Director of the Church and Society Sub-Unit, whom I have known since the United Nations conference on New and Renewable Sources of Energy (Nairobi, August 1981). I am also grateful to the Most Rev. Dr. John Habgood, Moderator of the Church and Society Sub-Unit, for his wise counsel and pastoral approach while conducting the periodical sessions of the Church and Society Working Committee.

It will be noticed that I have not referred to his well written book, Religion and Science (London: 1964) in all my chapters except the last one. This is because I was not aware of the book until August 1986, when the writing of most of my book had already been completed. The chapter entitled "Between Objectivity and Subjectivity" was written after reading through John Habgood's book, and I certainly would have incorporated it in my reference notes had I come across it earlier.

J.N.K. MUGAMBI
Nairobi, February, 1987

CHAPTER ONE

GOD HUMANITY AND NATURE IN ECUMENICAL DISCUSSION

1. Introduction

Ecumenical discussion concerning God, Humanity and Nature can be traced to the early Church. Documentation on it can be found in the New Testament, both in the gospels and in the epistles. (cf. Matt. 6: 25-34; John 1: 1-18; Romans 3: 19-31; Hebrews 1: 1-4). Within the Modern Ecumenical Movement, concern to clarify the relationship between God, Humanity and Nature, can be traced to the preparations for the World Missionary Conference convened at Edinburgh in 1910. Underlying those preparations was the apprehension that secularism in Europe was undermining the basic Christian doctrine of creation, and threatening to replace this doctrine with the hypothesis that science and technology, based on "Laws of nature" could transform the world according to human designs. The urgency expressed at the World Missionary Conference, to evangelize the world in that generation, was rooted in the conviction that the whole world needed to receive the "Good News" of God's involvement in history.[2] The World Missionary Conference stimulated the evolution of those three movements, which have coalesced into the World Council of Churches - namely,

(i) The Faith and Order Movement which still retains that title in the WCC,

(ii) The Life and Work Movement which, within the WCC has ensured that the Ecumenical Movement is involved in programmes to relate the Church with Society, and finally

(iii) The International Missionary Council, which in 1961 was incorporated into the WCC as the Division of World Mission and Evangelism, now CWME. It is in the context of this background that we discuss this theme.[3]

Although none of the significant ecumenical conferences of the 1920s specifically discussed "God, Humanity and Nature" as a topic, it is clear that their agenda was intended to highlight God's activity in the world, and the role of the Church in enhancing and witnessing to that activity. The Stockholm Conference on Life and Work (1925) was mainly concerned with the application of the Gospel in all aspects of life. The 1927 Lausanne Conference on Faith and Order started the process of comparative ecclesiology, which has culminated in the ecumenical statements on Baptism, Eucharist and Ministry, approved by the WCC Sixth Assembly at Vancouver, Canada, in 1983. The International Missionary Conference at Jerusalem in 1928 was concerned primarily with Christian Mission in the contexts of non-Christian religious and secularised society.

During the 1930s, the next round of ecumenical conferences sharpened the foci of discussion, and its function in society, including the relationship between Church and State. The Edinburgh Conference on Faith and Order 1937 dealt with the role of the Church in fulfilling the purpose of God in history with particular reference to the sacraments .

The International Missionary Conference at Tambaram, India in 1938, deliberated on the task of the Church to proclaim the Christian Message in a predominantly non-Christian world.

It is important to emphasise the close connection and relationship between the three movements which today express themselves in the WCC, because an understanding of that connection will help us to appreciate the significance of their themes. The link between them must not be broken, because that link is rooted in the Gospel itself.

2. Amsterdam 1948 to Evanston 1954

The earliest formulation of this theme is to be found in the Oxford Conference on Life and Work (1937), where the Church was challenged to exemplify the unity of humankind under God:

> On every side we see men seeking for a life of fellowship in which they experience their dependence on one another. But because community is sought on a wrong basis, the Intensity of the search for it issues in conflict and disintegration. In such a world the Church is called to be in its own life that fellowship which binds men together in their common dependence on God and overleaps all barriers of social status, race or nationality.[4]

Thus the call for church unity was viewed as an exemplary contribution. The quest for this unity was considered to be founded on erroneous foundations, which could not guarantee success. Unity of humankind could not be achieved through human effort alone, without recognizing human dependence on God as Creator!

At the WCC First Assembly in Amsterdam, 1948, this theme was embedded in the first message of the member churches to the world. Two paragraphs of that message are quite emphatic:

> When we look to Christ, we see the world as it is - His world, to which He came and for which He died. It is filled both with great hopes and also with disillusionment and despair. Some nations are rejoicing in new freedom and power, some are bitter because freedom is denied them, some are paralysed by division, and everywhere there is an undertone of fear. There are millions who are hungry, millions who have no home, no country and no hope. Over all mankind hangs the peril of total war. We have to accept God's judgement upon us for our share in the world's guilt. Often we have tried to serve God and mammon, put other loyalties before loyalty to Christ, confused the Gospel with our own economic or national or racial interests, and feared war more than we have hated it. As we have talked with one another in Christ, and because we lacked this correction, the world has often heard from us not the word of God but the words of men.[5]

Again:

> Our coming together to form a World Council will be vain unless Christians and Christian congregations everywhere commit themselves to the Lord of the Church in a new effort to seek together, where they live, to be His witnesses and servants among their neighbours. We have to remind ourselves and all men that God has put down the mighty from their seats and exalted the humble and meek. We have to learn afresh together to speak boldly in Christ's name both to those in power and the people, to oppose terror, cruelty and race discrimination, to stand by the outcast, the prisoner and the refugee. We have to make of the Church in every place a voice for those who have no voice, and a home where every man will be at home. We have to learn afresh together what is the duty of the Christian man and woman in industry, in agriculture, in politics, in the professions and in the home. We have to ask God to teach us together to say No and to say Yes in truth. No to all that flouts the love of Christ, to every system, every programme and every person that treats any man as though he were an irresponsible thing or means of profit, to the defenders of injustice in the name of order, to those who sow the seeds of war or urge war as inevitable; Yes to all that conforms to the love of Christ, to all who seek for justice, to the peace-makers, to all who hope, fight and suffer for the cause of man, to all who even without knowing it - look for new heavens and a new earth wherein dwelleth righteousness.[6]

3. Evanston 1954 to New Delhi 1961

The message of the WCC First Assembly, which set the theological tone for subsequent Assemblies, affirmed the unity of humankind, and the dependence of humanity of God. The theme of that Assembly was "Man's Disorder and God's Design", reminding the world after the war, that the great destruction of the world by military technology must be contrasted with God's creative and recreative responsibility, in which the Church was invited to participate.

At the WCC Second Assembly in Evanston, Illinois, USA, the member churches continued to affirm the unity of humanity, under the theme "Jesus Christ, the Hope of the World". Reference to the "World" indicated an extension of the scope of Christian concern. Jesus Christ is the hope not only of humankind, but of the whole world - the whole of Creation including human beings. Thus the unity of humankind is linked with the unity of the world. The relationship between God, humanity and the world, is that God through Jesus Christ is the hope both of the world in general, and of humanity in particular.[7]

4. New Delhi 1961 to Uppsala 1968

In New Delhi, at the WCC Third Assembly in 1961, the affirmations of the Second Assembly were given clearer expression, with regard to the relationship between God, Humanity and Nature. The concluding paragraph of the Message to the world from the Third Assembly, declared:

> This letter is written from the World Council of Churches (Third) Assembly. But the real letter written to the world today does not consist of words. We Christian people, wherever we are, are a letter from Christ to his world 'written not with ink but with the spirit of the living God, not on tablets of stone but on tablets of human hearts.' The message is that God in Christ has reconciled the world to himself. Let us speak it and live it with joy and confidence, "for it is the God who said 'Let light shine out of darkness' who has shone in our hearts to give the light of the knowledge of the glory of God in the face of Jesus Christ."[8]

The dynamic character of "the world" was affirmed at New Delhi. Mission was now viewed not as the responsibility of specialized mission agencies, but as the obligation of the whole Church at both the institutional and the personal levels. The cosmic and the historical perspectives of "the world" were harmonized. Humankind would be understood both as an integral part of creation, and participant in the creative work of God in history. Following the Third Assembly, several studies were launched in the WCC to explore these new insights, in the context of ecumenical thought so far.

It seemed theologically consistent to affirm the unity of humankind, and the unity of the whole of creation. But what was the role of the Church in witnessing to this unity? At the Faith and Order Conference in Montreal, Canada in 1963, the report of Section I on "The Church in the Purpose of God" stated:

> The freedom of discipleship to the crucified - risen Christ leads to a new solidarity with all God's creatures. The love of Christ which is unconditioned drives us to identify ourselves with all men...[9]

In the Faith and Order Paper No.88, it is reported that complete agreement on this view proved impossible at the Montreal Conference, and this lack of consensus led the Faith and Order Commission to "study the problem of Christ's lordship over the world and the relationship between creation and redemption." The study was to be conducted under the title "Creation, New Creation and the Unity of the Church". It was later combined with the study on "The Finality of Christ in an Age of Universal History". In 1962, the Faith and Order Commission meeting in Bristol adopted the study on "God in Nature and History".

Commenting on this latter study, the Faith and Order Paper No.88 reports:

> This study, strictly theological in character, deals with the omnipotence of God in creation and history. The Trinitarian Movement is a historical process which

> will reach its fulfilment in the Kingdom of God. In this activity in universal history, God reveals himself to men and women and invites them, in covenant with himself, to obey the call of his promise of the Kingdom...[10]

In addition to Biblical references, this study on "God in Nature and History" recaptures the insights that had evolved within the Ecumenical Movement since the Life and Work Conference at Oxford in 1937:

> Mankind is understood as a whole, with a common nature (created with one head), with common problems (sin, suffering, death), with a common future (the kingdom of God for every nation, people, and tongue, the uniting of all things to Christ) and with a common calling (to faith, love and hope). So God's history must sooner or later give birth to the conception of universal history".

This Faith and Order Study on "God in Nature and History" reflects one aspect of ecumenical thought in the period between the Third Assembly, New Delhi, 1961 and the Fourth Assembly, Uppsala, 1968. Another aspect is reflected by the studies facilitated by the Church and Society Sub-unit during that period.

The World Conference on Church and Society, convened at Geneva in 1966, was concerned with the theme "Christians in the Technical and Social Revolutions of our Time". In the official report of that conference, it is stated:

> The Church is called, in the world, to be that part of the world which responds to God's love for all men and to become therefore the community in which God's relation to man is known and realized. The Church is in one sense the centre and fulfilment of the world. In another it is the servant of the world and the witness to it of the hope of its future. It is called to be the community in which the world can discover itself as it may become in the future.[12]

5. Uppsala 1968 to Nairobi 1975

While the Faith and Order Study linked contemporary world community with the "History of Salvation" through Christ, the Church and Society Conference linked this community with the future possibilities thus raising the challenge of human responsibility in shaping the future.

The WCC Fourth Assembly at Uppsala, Sweden, in 1968 held as its theme: "Behold, I Make All Things New". This Assembly more than any previous one, emphasised the need for the churches to commit themselves to participate actively in God's work of renewing the human community within history. It was at Uppsala that practical measures were approved, for the churches to demonstrate their willingness to line up to the message of the WCC First Assembly to the world. Already, the World Conference on Church and Society in 1966 had highlighted the struggle of peoples in the "Technical and Social Revolutions of our Time" and emphasised that "For Christians to stand aloof from this struggle is to be disobedient to the call of God in history".

The perspective of renewal was expressed by the WCC Fourth Assembly as follows:

> The Holy Spirit has not only preserved the Church in continuity with her past but is also continuously present in the Church, effecting inward renewal and recreation. The Church in heaven is indeed one with the Church on earth, yet the Church on earth does not stand outside the historical process. As the pilgrim people of God the Church, at every point of time, is implicated in the varying hopes, problems and fears of men and women, and in the changing patterns of human history. The Church is faced by the twin demands of continuity in the one Holy Spirit, and of Renewal in response to the call of the Spirit amid the changes of human history.[13]

The Uppsala Assembly was conscious of the scepticism and criticism towards the work of the churches, which often appeared irrelevant to the needs and struggles of the people of the world. Thus this Fourth Assembly called on the churches to forge a "new openness towards the world".

The Church is bold in speaking of itself as the sign of the coming unity of humankind. However well founded the claim, the world hears it sceptically, and points to "secular catholicities" of its own. For secular society has produced instruments of conciliation and unification which often seem more effective than the Church itself. To the outsider, the churches often seem remote and irrelevant, and busy to the point of tediousness with their own concerns. The churches need a new openness to the world in its aspirations, its achievements, its restlessness and its despair.[14]

6. Nairobi 1975 to Vancouver 1983

The WCC Fifth Assembly at Nairobi in 1975 responded to this challenge for "openness" by drawing the attention of the churches to the needs and aspirations of various sections of the human community in the world as a whole. The theme of the Fifth Assembly was "Jesus Christ Frees and Unites". The association of liberation with reconciliation was a new insight in ecumenical thought, even though both these concepts had been considered separately in earlier conferences and consultations.

In this Assembly it was observed that freedom was a necessary precondition for genuine reconciliation, because only free parties could freely choose to be reconciled to one another. This insight was a further improvement on the theme of the Unity of Humankind, because it linked the notion of unity with that of freedom. Unity at the expense of freedom would not be consistent with the Gospel. Freedom was given the widest possible expression covering all those conditions which prevent human beings from enjoying their full humanity. The message from the WCC Fifth Assembly included statements on "What Unity Requires" with reference to: the Church, the handicapped, the "community of women and men and the wholeness of the Body of Christ", political struggle and the search for cultural identity in relation to the oneness of the Church universal.[15]

In the period between the Fourth and the Fifth Assemblies, the Church and Society Sub-Unit introduced a new dimension into the ecumenical understanding of the unity of humankind. The Report of the Central Committee to the Fifth Assembly stated:

> As an innovator of ecumenical social thought and action the Uppsala Assembly may be considered a landmark in ecumenical history. Stimulated by the findings of the 1966 World Conference on Church and Society (on the theme "Christians in the Technical and Social Revolutions of Our Time"), the (Uppsala) Assembly (1968) recommended a number of new social programmes: for world economic development, the study of non-violent strategies in effecting social change, the elimination of racism and, perhaps most unexpected of all, an enquiry into "Science and the problems of world-wide change,"[16]

With the Uppsala mandate, the Church and Society Sub-unit embarked on the promotion of ecumenical reflection on two of these topics, namely (a) "The Future of Humanity in a World of Science-Based Technology", and (b) "Violence, Non-Violence and the Struggle for Social Justice: The Challenge to the Churches." The first of these topics led to the organization of another World Conference with far-reaching impact. This was the World Conference on "Faith, Science and the Future" at the Massachusetts Institute of Technology, USA, 12-24 July, 1979.[17]

The Oxford Conference on Life and Work in 1937 was very influential in shaping ecumenical thought towards formation of the World Council of Churches, and gave guidance for the agenda of the WCC First Assembly at Amsterdam in 1948. Likewise, the Geneva World Conference on Church and Society in 1966, greatly influenced the Ecumenical deliberations of the Fourth Assembly at Uppsala in 1968. On these two precedents, the 1979 MIT World Conference on Church and Society widened the scope of ecumenical thought by bringing together theologians, scientists, philosophers, politicians and technocrats to discuss "Faith, Science and the Future". The convening of this conference was rooted in the conviction that life on earth was threatened by technological invention and innovation. It was necessary to bring Ethics and Theology to the attention of scientists, technocrats, politicians and economists whose interests were far from theological and ethical implications of their work.

The meeting of the Church and Society Working Group in May, 1976, following the WCC Fifth Assembly observed:

> The twin issues around which the world's future revolves are justice and ecology. "Justice" points to the necessity of correcting maldistribution by the products of the earth and bridging the gap between rich and poor countries. "Ecology" points to humanity's dependence upon the earth. Society must be so organized as to sustain the earth so that a sufficient quality of material and cultural life for humanity may itself be sustained indefinitely. A sustainable society which is unjust can hardly be worth sustaining. A just society

> that is unsustainable is self defeating. Humanity now has the responsibility to make a deliberate transition to a just and sustainable global society.[18]

The Working Group on Church and Society, at that meeting in May 1976 identified the following five levels:

1. The theological and ideological critique of the prevailing scientific and technological world-view, including an examination of the theological and ethical dilemmas posed by developments in such areas as biological research and nuclear energy.

2. The development of appropriate (i.e. sustainable) technologies in relation to energy, agriculture and industrial development.

3. The re-examination of traditional political and economic principles, policies and systems in the light of the demands for a sustainable society.

4. The Ethical and Social Issues involved in the transfer of technology between rich and poor countries.

5. The consequences for Christian social thought and witness, of these new concerns.

The World Conference on "Faith Science and the Future" provided an opportunity for ecumenical reflection on a very broad spectrum of issues, and the official Report of that Conference contains a great deal of information that deserves to be followed up within the Ecumenical Movement. The idea of sustainability was lifted, against the threat of nuclear war, to become an aspect of the main theme of WCC Sixth Assembly at Vancouver, Canada, in 1983.

7. Vancouver 1983 - To The Seventh WCC Assembly

In Vancouver the WCC Sixth Assembly found it necessary to modify the concern for Justice, Participation and Sustainability, which had been formulated to summarise the outcome of the Fifth Assembly. The new mandate to be pursued between the Vancouver and the Seventh Assemblies, is "Justice, Peace and the Integrity of Creation". It is interesting to note that the Sixth Assembly retained as a priority in the new mandate "Sustainability", and "Participation" was replaced by "Peace" and "Integrity of Creation". Why was this shift considered necessary? A detailed answer to this question will require a separate study. Let it suffice to observe here, that the new formulation was intended to reduce ambiguity and vagueness as well as give direction for the churches in view of the increasing threat of nuclear confrontation, and of the destruction of the environment by technology.

It is important to emphasise that these new thrusts which the Church and Society Sub-unit encouraged, were directly related to the quest for a fuller understanding of the Unity of humankind, and of the role of the

Church within that unity. Those thrusts had not been fully discussed at the time of the Vancouver Assembly, and will need further exploration in the Seventh and possibly in the Eight Mandates of the World Council of Churches.

At the WCC Central Committee Meeting in Geneva, July 1984, Unit I presented its report indicating the emphases, orientation and projects of its Commissions and Working Committee between the Sixth and the Seventh Assemblies. The affinity and overlap between the work of these Commissions and Working Committees is quite evident. This overlap is also quite understandable, considering the common heritage of the concerns in Unit I since the 1920s. These Commissions and Working Committees have their origin in the three movements which coalesced to form the World Council of Churches - Faith and Order, Life and Work and the International Missionary Council - as indicated in the introduction of this presentation.

We have traced the study of the theme "God, Humanity and Nature" in modern Ecumenical Thought, and observed that all the three movements, each in its own way, were involved in the development of this theme. The Faith and Order Paper No. 88 entitled Unity in Today's World, in part documents development until July 1986, when the WCC - Unit I commissions meeting was scheduled.

The major concerns and priorities for Unit I in the Post-Vancouver period are listed as follows:[19]

(a) Growth towards visible unity and conciliar fellowship. Facilitating the reception of the BEM document (Gathered for Life, Report of PGC, pp.251-253).

(b) The nature and calling of the Church, its ministry ways of authoritative teaching and decision-making (ibid., p.252).

(c) Discovering new dimensions of self-understanding of the churches in response to their deepening participation in the ecumenical movement, growth in the fellowship of the WCC, dialogue with and service to all neighbours in the world. (ibid. pp. 252, 254, Issue Groups No. I and II).

(d) Mission, evangelism and culture. Evangelism undergirding all WCC Programmes. Assistance to member churches in their mission to proclaim Christ - the Life of the World (Report of the PGC, p. 25).

(e) Dialogue with people of other faiths, various cultures and ideologies. Issues posed by and in dialogue; dealing especially with theological issues raised by dialogue (ibid., pp 252, 254; I and II).

(f) Theological and ethical challenges posed by science, rapid technological change and the ecological crisis (Issues Groups III, V and VI; Message).

The Report adds:

> These priorities identified by the Sixth Assembly point to the need to continue many of the ongoing programmes within the four sub-units of Unit I, and to focus on special areas that arise out of some of the basic concerns of the (Sixth) Assembly.

One of the new programmatic thrusts which links all the four components of Unit I, is the concern to develop "an understanding of the relationship between evangelism and culture in respect of both the contextual proclamation of the Gospel in all cultures and the transforming power of the Gospel in any culture."

Study of this topic is envisaged to include the following sub-topics:[20]

(i) the problems of religious and cultural freedom;

(ii) various forms of spirituality in cultures;

(iii) the contemporary modern multinational industry culture;

(iv) the technological culture;

(v) the liberation of women in different cultural contexts;

(vi) the "culture of patriarchy" and its impact on women in mission.

Clearly, Church and Society can make its contribution by developing an understanding of at least two of these sub-topics - "the contemporary modern multinational industry culture" and "the technological culture".

The priorities of the Church and Society Sub-unit as presented to the Central Committee in July 1984 are:[21]

1. The speed and social impact of science-based technologies and their potential positive role in shaping the future.

2. The relationship between God, Humanity and Nature and its bearing upon value decisions governing the scope, character and direction of science and technology.

The presentation has endeavoured to trace the context within which "God, Humanity and Nature" became a priority and programme theme for the Church and Society sub-unit in the post-Vancouver period. In exploring this theme the work that has already been done should neither be forgotten nor duplicated. Rather it should be enriched with new perspectives arising from the ecumenical movement as a whole.

Conclusion

The foregoing outline of the ecumenical context within which the theme "God, Humanity and Nature" has arisen, leads us to raise a few questions for consideration in the post-Vancouver period:

1. What new insights can we contribute towards the continuing discussion?

2. Are we taking into serious consideration the work that has already been done, and avoiding both duplication and repetition?

3. Are we ensuring that our work is done in the most appropriate Unit, Commission, Sub-unit?

The open-ended questions may provide us with criteria to guide us in our future work. Hopefully, the Church and Society Sub-unit will again, as in the past, blaze new trails in ecumenical thought, by extending the frontiers of our enquiry.

Reference Notes

1. The Presentation at Bossey in April 1985 on "God, Humanity and Nature" was delivered orally, and the written paper was not circulated. The present version captures the multi-disciplinary character of a study such as this one but restricts documentation to the official reports of the Modern Ecumenical Movement.

2. On the development of the Modern Ecumenical Movement see Ruth Rouse and Stephen Neill, eds., A History of the Ecumenical Movement, Vol. I: 1517 - 1948, Philadelphia: The Westminster Press, 1954.

3. On the historical aspect see, for example, Norvald Yri, Quest for Authority, Nairobi: Evangel Publishing House, 1978. Authoritative texts on the History of the Ecumenical Movement are available at the WCC Publications office, Geneva. Various aspects of this theme, from a historical perspective are discussed in G. Muller-Fahrenholz, ed., Unity in Today's World: Faith and Order Studies on Unity of the Church - Unity of Humankind, Geneva: WCC Faith and Order Paper No. 88, 1988. The Gospel for All Realms of Life, Reflections on the Universal Christian Conference on Life and Work, 1925, with Contributions by W. A. Visser t'Hooft and others, Geneva, WCC, 1975; Church and Society: Ecumenical Perspective Essays in Honour of Paul Abrecht, Ecumenical Review, Vol. 37 No. 1, Jan. 1985, Geneva, WCC.

4. The Churches Survey Their Task, The Report of the Oxford Conference on Church, Community and State, London: Allen and Unwin Limited, 1937, Vol. VIII; p. 57, cited in Faith and Order Paper No. 88, p.16.

5. John H. Leith, ed., Creeds of the Churches, Third Edition Atlanta: John Knox Press, 1982, pp. 574 -577.

6. Ibid.

7. Faith and Order Paper No. 88, Unity in Today's World, pp. 18-21.

8. Message of the WCC Third Assembly to the Churches, in New Delhi speaks about Christian Witness, Services and Unity, ed. by W.A. Viser t'Hooft, New York: Association Press, p. 20.

9. Unity in Today's World, pp. 25-26; P. C. Roger and L. Vischer, eds., The Fourth World Conference on Faith and Order, The Report from Montreal, 1963, New York: Association Press, 1964.

10. Unity in Today's World

11. Ibid., p. 26; New Directions in Faith and Order, Bristol, 1967, p. 24 ff.

12. Unity in Today's World

13. John H. Leith, Creeds of the Churches, op. cit., p. 593.

14. Ibid., p. 594.

15. David E. Johnson, General Editor, Uppsala to Nairobi. Report of the Central Committee to the Fifth Assembly of the World Council of Churches, Geneva, WCC; London SPCK, New York: Friendship Press, 1975.

16. Uppsala to Nairobi, pp. 108-119.

17. For documents on the MIT 1979 Conference see: Faith, Science and the Future: Preparatory Readings for the 1979 Conference, Geneva, WCC, 1978. Faith and Science in an Unjust World, Vols. I and II. Report of the WCC Conference in Faith Science and the Future, Vol. I - Plenary Presentations; Vol. II - Reports and Recommendations.

18. Faith Science and the Future: Preparatory Readings op. cit. p.5

19. "Report of the Programme Unit on Faith and Witness" (Unit submitted to the Central Committee, Geneva, July 1984, pp. 3-4.

20. Ibid., p.17.

21 Ibid., p.26.

CHAPTER TWO

JUSTICE PEACE AND THE INTEGRITY OF CREATION IN THE ECUMENICAL AGENDA

1. Introduction

On receiving a copy of the Faith and Order Document entitled "The Integrity of Creation in the Light of the Apostolic Faith" (produced at Stavanger, Norway, 13-26 August, 1985), I communicated to Geneva the following brief response:

In my understanding, the theme Justice, Peace and the Integrity of Creation is mandated by the Sixth WCC Assembly to be the primary concern of all Units, Sub-units and Commissions. The theme needs to be developed as a whole by each Unit, Sub-unit and Commission, until the next mandate arising from the Seventh WCC Assembly. This is the way the modern Ecumenical Movement has operated. The major task is to explore how the theme as a whole is interpreted in the work of each Unit and Sub-unit in particular, in the work of the WCC in general, and in the life of the churches universally. Exclusive treatment of singular components of the theme will distort its integral, wholistic and ecumenical emphasis.

With regard to the Church and Society Sub-unit, on the basis of this understanding, the study on "Integrity of Creation" is an issue of concern in the present WCC mandate only in its relation to the whole theme of Justice Peace and the Integrity of Creation.

Indeed, the Church and Society Sub-unit since 1948 has followed this wholistic and integrated approach, promoting interaction between professionals and experts on the one hand, and church leaders and laity on the other. Though the Sub-unit may claim "high technology" experts as its target group, the Sub-unit's interest in that group would be in order to bring experts' contribution to bear on the fears, joys, hopes and sorrows of those who are innocent victims of the technology these experts manage and mismanage. Therefore, ethics ought to be considered in terms of moral commitment rather than in theory exclusively.

Independently, Prof. Charles Birch has strongly expressed the same insight in his paper addressed to the WCC Unit I Commissions Meeting (Potsdam, GDR, July 1986) on "Justice, Peace and the Integrity of Creation".

There is no way in which the issues of peace justice and the integrity of creation can be properly faced by a series of working groups, one of which might take peace, another justice and a third integrity of creation. There is no integrity in that approach.

Integrity has to do with wholeness, completeness, the notion of organic unity which is more than an aggregate, and the reciprocal relation of the individual elements to the ensemble. We may understand the meaning of integrity better if we think of its opposite; fragmentation, separation, alienation, estrangement.[2]

My Paper has been prepared in response to a request by the Church and Society Director that I speak on the "Integrity of Creation" from an African perspective. It is worthwhile to state from the beginning that it would be a distortion of the WCC theme, Justice, Peace and the Integrity of Creation, to speak only about the third component of the theme. It is necessary that the theme be discussed as a whole. Secondly, in the modern Ecumenical Movement the effort, from the beginning, has been to discern ecumenical perspectives, rather than parochial, partial views. Therefore, my presentation will not emphasize an "African perspective", even though it is prepared on a desk somewhere in Africa. Thirdly, effective discussion on this theme demands a consideration of the historical and ecumenical context as a priority. So far in the Church and Society Sub-unit since the WCC Sixth Assembly this historical and ecumenical dimension has not been emphasized, and for this reason the present Paper is entitled "Justice, Peace and the Integrity of Creation in the Ecumenical Agenda." It will be more fruitful at the present time to emphasize the ecumenical, rather than "an African" perspective or "an Asian" perspective, or even a "European" perspective for that matter.

2. The Ecumenical Context

It is worthwhile to emphasize that the Modern Ecumenical Movement draws its motivation from the ministry of Jesus and from examples set by the early church in both apostolic and post-apostolic times. The term OIKUMENE means "the whole inhabited world", considered as an integrated unit. During the apostolic period, there were many Oikumenes. The Mediterranean region constituted one Oikumene, integrated by Hellenistic culture, language and Roman imperial authority.

From a Christian perspective, it is within this Graeco-Roman Oikumene, that God's involvement in history is most clearly exemplified. But we must always remember that at that same time there were many other Oikumenes in Asia, Africa and across the Atlantic Ocean. God was certainly involved in those other Oikumenes also otherwise the title "God" would not be applicable. Thus our study of, and association with, biblical and ecclesiastical history, is in order for us to learn, through one illustrated case, how God interacts with the world.

Oikumenes have expanded and shrunk from time to time in history, depending on the fortunes and misfortunes of their leaders, and on God's universal plans.

We are presently living in the most expansive Oikumene the world has ever known, stretching across all the oceans and land masses on earth; from pole to pole; to several miles in the depth of land and ocean; and extending many millions of miles into outer space. Our Oikumene stretches to the minute mysteries revealed by micro-analysis, and also into the vast emptiness discovered between the stars and planets through improvements in communications and other technologies.

Thus our ecumenical context is one which embraces all peoples, all creatures, and all stars and planets we have come to know about. It is this vast Oikumene we are challenged to take into account when we talk about "God, Humanity and Nature," and about "Justice, Peace and the Integrity of Creation."

3. The Biblical Context

In the Old Testament, the three concepts of "Justice", "Peace" and "Integrity of Creation" are very close in meaning and usage, and have often been applied interchangeably. The most striking indication of their inter-relationship, is that the failure of the people to uphold justice becomes a reason for the people to experience disruption of both the natural and the cultural environment. Thus culture and nature are inextricably woven together. For example, owing to the disruption of peace and justice in the generation of Noah, God sends torrential rain which floods the whole Oikumene, destroying everything except the remnant of which Noah and his family is an integral part. Owing to the righteousness of Noah, a new Oikumene is established after the Flood has subsided (Genesis, Chapters 6-9).

In Egypt, the failure of Pharaoh to uphold justice leads to the "ten plagues", which are all disruptions of the natural order and normal expectations. Moses then becomes the "instrument" to lead the oppressed people to liberation, owing to his ethical sense, moral commitment and religious conviction. (Exodus Chapters 1-12). These norms are echoed time and again in the prophetic and wisdom literature.

Likewise peace in the Old Testament is understood not in terms of the absence of war but rather, as the harmonious and just co-existence between peoples and their environment. It is in the context of this understanding that the Jubilee was established, to ensure that in the fiftieth year, a balance would be restored whereby all people would start on a common footing once more. (Leviticus Chap. 25; Jeremiah 6:14, Ezekiel 13:10).

In the New Testament, peace amongst humankind is related to cosmic peace especially in Luke's gospel (Lk. 2:14; 19:38). "Peace on earth" is linked with "goodwill among men", suggesting that without goodwill there can be no peace.

In both the Old and New Testaments, "Justice" is also used interchangeably with "righteousness". Thus Justice is an ethical rather than a legal concept. Today there is a tendency to consider justice in legalistic terms. Jesus in his teaching condemns this approach in his criticism of the Pharisees, who are meticulous in observing the "letter" of the law and yet subvert justice by failing to honour the "spirit" of the same law (John, Chapter 7).

4. Justice Peace and the Integrity of Creation in Europe Before and After Constantine

The Christian Church before Emperor Constantine's Edict of Milan, (A.D.313) was made up of small communities in the periphery of Graeco-Roman Society. Questions of peace and justice were dealt with by imperial authorities, on the basis of political, economic and military considerations not directly related to Christianity at that time. With the Edict of Milan Christianity was tolerated in the Roman Empire, and the Emperor himself was viewed as protector of the Church. The convening of the Council of Nicea (A.D. 325) can best be understood in the context of Constantine's quest for peace and unity (integration) in his empire. The fact that the heated debates at Nicea were shared by bishops from the

whole of the Roman Oikumene, indicates that Constantine's quest was based on a practical necessity to keep his empire intact at a time when it was on the verge of disintegration.

The Ecumenical Councils from Nicea onwards, during the so-called Dark Ages in Europe, served to affirm the western Oikumene, dominated by the "Catholic" Church and intolerant of any views that seemed to be at variance with official doctrine. The Islamic Oikumene in this period proved more creative than the Christian one, until freedom of expression dawned again in Europe with Medieval Scholasticism.

The European Renaissance expanded the former Graeco-Roman Oikumene, to include the continents of Africa, Asia and the Americans. As Hans-Jochen Margull has correctly observed:

> In 1492 Columbus arrived in America, and in 1498 Vasco da Gama landed in Calicut on the Malabar Coast of India. It would be inadequate to look at these historical events merely from a geographical, economic and political aspect; they are of eminently theological significance. As Europe set out, partly from rather questionable motives, to discover and conquer the world, the European became conscious of the realm of God's creation in its complete extent, and he became aware, beyond his own existence, of mankind in all its plenitude. What had hitherto often been only a vague teaching of Christian dogmatics became, with the "discovery" of the continents, tangible reality.[3]

The pursuit of justice, peace and the integrity of creation following this expansion of the Euro-centric Oikumene, was evidently not consistent with the doctrinal affirmation that God is Creator of heaven and earth, and of humankind in his own image. Improved navigation and military technology facilitated plunder in Asia and the Americas, and lucrative trading in slaves from Africa across the Atlantic to the Americas. The huge profits accruing from Asia, Africa and the Americas, seemed to justify the acquiescence of the churches concerning the injustices, wars and destruction forged by those "conquistadores" of the powerful nations of Europe. Critical voices, such as those of Bartolome de Las Cases in Latin Ameria[4], Roberto de Nobili[5] in India and Matteo Ricci[6] in China - such critical voices are rare during the expansion and consolidation of the modern Euro-centric Oikumene. The Reformation brought "Liberty" to Europe and the European diaspora, but ironically, those same values were not applicable to the peoples the conquerors found abroad. Science and technology expanded the Oikumene and at the same time put the Church on the defensive concerning epistemological limits. Whereas the Church set these limits at Scripture and Ecclesiastical Tradition, the free-thinkers, scientists and inventors relied on reason and human inventiveness. God seemed to be a "useless hypothesis" in an age of "empirical science" and "science-based technology".

In 1700 G.W. Leibnitz founded the Royal Prussian Academy of Science in Berlin, with a concern for the "propagation of the faith through science."[7] By 1800, "science" was becoming a new "faith", as an alternative to Christianity. Auguste Comte in the 1820s advocated for a "positive philosophy", based on science rather than theology or metaphysics. This positive philosophy was postulated as the foundation of a religion of humanity, in which God would be dethroned and replaced by humanity.[8]

One hundred years later the Modern Ecumenical Movement was born, partly in response to "secularism" which seemed to be openly in competition with Christianity. Science and technology had attained "maturity", and seemed to offer great promise for the Euro-centric Oikoumene, of which the people of Africa, Latin America and Asia were at the periphery. The World Missionary Conference (Edinbourgh 1910) emphasised the integrity of the world, and the necessity of proclaiming the Gospel to the world as a whole, within a generation. Those ecumenical pioneers who proclaimed this vision, considered that science and technology at that time could facilitate the evangelization of the peoples of all continents in a generation. To achieve this, co-operation was necessary between all those individuals and organizations that were involved in Mission. It seemed to them that Science and Technology could bring peace, justice and integrity of creation.

5. Justice Peace and the Integrity of Creation in the Modern Ecumenical Agenda

Despite the challenge posed to the Church by secularism in Europe and North America, the ecumenical pioneers believed that there was great urgency to evangelize the peoples who had not yet been "polluted" by secularism, but were nonetheless in need of being saved from "paganism". Although the vision of these pioneers was of missionary activity spreading from "Christian" Europe to "non-Christian" continents, the Modern Ecumenical Movement has evolved into a fellowship in which reciprocal interaction is possible, in faithful response to the one Gospel.

Within this Ecumenical movement there cannot be multiple approaches to Justice, Peace and the Integrity of Creation. There may be misunderstandings and disagreements as in a family. However, misunderstandings and even disagreements, ought not to generate despair. Rather, disagreements are indicative of the fact that the world is not homogenous. They are also a challenge to all people involved, to strive towards a consensus without imposing themselves on one another.

Justice means, among other things, fairness and proportionate sharing of everything that can be shared - including science and technology. Peace means, among other things, the prevalence of harmony amongst all members in an environment. Today, our environment includes the whole Oikoumene, extending to outer space and to the great depth of land and ocean. It extends to the smallest of the smallest particles, and to the largest of the largest galaxies. In such an Oikoumene, there cannot be any peace in isolation. The peace of one part of humanity is inextricably bound with the peace of all. Likewise, Integrity of Creation means, among other things, the affirmation of the organic unity of all members of creation, including humankind. It is clear today, perhaps more than ever before, that the maintenance of ecological balance on this planet is a collective responsibility for all individuals, peoples and nations. It is necessary to deal with ecology on a global basis, because pollution knows no borders.

6. Justice Peace and the Integrity of Creation in the Agenda of Church Society

The 1979 MIT Conference on Church and Society perhaps more than any other

ecumenical event, gave prominence to the implications of a "Just, Participatory and Sustainable Society." This phrase was formulated in 1976, shortly after the WCC Fifth Assembly (Nairobi, 1975) to express the concerns and aspirations of that Assembly. The phrase became the theme of the WCC during the Fifth Mandate.

In the WCC Sixth Assembly (Vancouver, 1983), this phrase was critisised because it seemed not to fully reflect the interests, concerns and aspirations of the Oikoumene as a whole. As an improvement, a new formulation was proposed and accepted at Vancouver, to become the new theme between the Sixth and Seventh WCC Assemblies. It will be worthwhile, at Potsdam, to think ahead and discern new orientations in view of what the Modern Ecumenical Movement has so far achieved.

7. Towards New Orientations

Considering the issues, with which the WCC is concerned after Vancouver in the context of earlier ecumenical concerns, it appears worthwhile in the near future to deal more specifically with "Technology" as it relates to and influences "Society" and "Environment". These three concepts need further consideration, in the process of clarifying the theme Justice, Peace and the Integrity of Creation.

"Society, Technology and Environment" can be a theme for future exploration in preparation for the WCC Seventh Assembly. Elaboration on various aspects of this theme, if accepted, would have to be formulated in a separate working paper.

Reference Notes

1. J. N. K. Mugambi to E. Castro, 15th April, 1986, p. 2.

2. Charles Birch: Peace, Justice and the Integrity of Creation - Some Central Issues for the Churches", A Working Paper for the Meeting of Unit I Commissions and Working Groups of the WCC, Potsdam, GDR, July 12-20, 1986, pp.2-3.

3. Hans-Jochen Margull, "The Awakening of Protestant Missions", in History's Lessons for Tomorrow's Mission, Geneva, WSCF, C. 1960, pp. 137-148.

4. On Bartolome de Las Casas see, for example, Julio Barreiro, "Rejection of Christianity by the Indigenous Peoples of Latin America, in Separation without Hope? Essays on the Relation Between the Church and the Poor During the Industrial Revolution and the Western Colonial Expansion, Geneva: WCC 1978, pp.127-136.

5. Vincent Cronin, A Pearl to India, The Life of Roberto di Nobili, London: Darton Longman and Todd Limited, 1966.

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7. Hans Jochen Margull, op. cit., p.137; B. Russell, History of Western Philosophy, London: George Allen and Unwin.

8. On A. Comte see Colin Brown, Philosophy and the Christian Faith, Dovers Grove, Illinois: IVF, 1978, pp.141-143; John Passmore, A Hundred Years of Philosophy, Penguin Books, 1968, pp.15-17.

CHAPTER THREE

THE AFRICAN EXPERIENCE OF GOD, HUMANITY AND NATURE

1. Statement of the Problem

In this chapter, it is understood that the African Experience of God refers directly to the African Traditional Experience, rather than the contemporary religious experiences which are often confused, influenced and conditioned[1] by European, North American and Arabic traditions.

Early studies of the African Religious Experience were characterised by an exposition of religious Evolutionism,[2] in which African traditional peoples were analysed as simple communities in very early stages of Religious Evolution.[3] Complacency was quite evident with regard to the views which Europeans and North Americans expressed in these studies. The writers believed that Western Europe and Europeanised North America had reached the peak of religious development in nominal Christian Monotheism,[4] while Africa, in extreme contrast, had remained "primitive", "dark" and "undeveloped".[5] The continent of Africa as a whole was derogatorily described as "The Sleeping Question Mark". This attitude is explicit in studies published as late as 1945 as exemplified by the apparent sympathetic work of Placide Temples.[6] It is significant that although the book of Father Temples on "Bantu Philosophy" is today quoted as an authoritative work in the study of the African Religious Experience, it was originally written as an instructional guide for European Missionaries who were to work in close co-operation with the Colonial powers in their mission to 'civilize', rather than to evangelise.[7]

Later studies, several of which were published during the sixth decade of this century, concentrated their attention on Social Anthropology.[8] The religious aspect of these studies was often deficient and inconsistent, owing to the fact that many of the writers were not trained or even self-trained theologians, but Social Anthropologists or colonial agents,[9] or both. Consequently, there was a lack of uniformity in the use of terminology. The Religious Evolutionists discerned their own theories which they would apply to stereotype the evolution of religous thought, practice and experience among Africans, Asian and Oceanic people. They devised their own categories to contain their theories and serve their intellectual purposes at home:[10] categories such as animism, animatism, pantheism, totemism, polytheism and many others. Such categories were coined as phases rather than types of religious thought and experience.[11] The Social Anthropologists further clogged the studies of the African Religious Experience by adding even more categories and terminology, without standardisation.

At the dawn of the emergence of new African States, studies of the African Heritage claimed a new emphasis. Several Africans rose and began to study their own traditional backgrounds.[12] One of their chief objectives in that exercise was to show the European and American colonists that African political, social and religious heritage was as rich, good and original as, if not better than that of European and North American. Asserting themselves on behalf of their fellow Africans, they

therefore consciously attempted to present the African Heritage in philosophical and religious categories which Europeans and North Americans would understand, and which would make the colonists realise clearly the indignation of Africans who were conscious of their exploited and oppressed situation.

In such a context, there was a tendency and temptation on the part of these early African writers to overstate those aspects which might achieve effective assertion. Missionary activity had been used as a tool in the colonisation of Africa,[13] and the distortion of the African Self-Consciousness was one of the mistakes these writers intended to correct, especially with regard to the religious, social and political heritage. All European and North American students of the African traditional experience have a background which is rooted in a tradition of rational philosophy deriving its origins from pre-Socratic Greece.[14] The Nature Philosophy of the Milesian Philosophers provided a base on which Socrates and Plato grounded their questionings and rationalisations about God, Man and the Universe. The rationalisations, in turn, laid the foundations of European and contemporary American philosophical and religious presuppositions. The Nature Philosophers sought to explain the Universe in terms of the "Primary Element" on which they thought the entire Universe to depend. Water, air, fire, earth and motion were some of their suggestions. This tendency to reduce the entire universe into one primary element or concept is a characteristic of Euro-American thought and expression since pre-Socratic times. The individual is the Centre of the Universe, and everything else, including God and all Metaphysical Reality, is interpreted or explained from the individual's point of view.[23] Objectivity in practice becomes the individual's presentation of reality as it seems to that individual. These characteristics have been projected on the African traditional experience in all monographs on the subject and also in the synthetic conclusions of John Mbiti's works[16].

It may be questioned whether in the African traditional experience there is application of an analytical method similar to that developed from the Graeco-Roman foundation. Leopold Sedar Senghor has suggested that the African traditional thought and experience is synthetic, in the sense that everything is understood in terms of emotional response, whereas, according to him, western thought and experience responds to the environment by systematic rational analysis. When an African contemplates on an object before him, he is not satisfied with making abstract theories about it. The object and the subject must be intimately related. The individual makes the object before him a part of himself by feeling and handling it, he makes any categorical statements about it. For example, to decide that a banana is good, he must taste it.[17]

Senghor refers to Placide Tempels as one of those whose theories support Senghor's observation about African traditional thought and experience as a philosophical synthesis. Placide Tempels thought he had understood the Baluba traditional community in Zaire, when he published his short book under the title of "La Philosophie Bantoue", now translated into English as "Bantu Philosophy".

In apparent contrast to this interpretation of African traditional thought and experience as synthetical Bertrand Russel and other European philosophers have written analytical treatises on various issues of

European interest. In many of his books, Russell applies his training in deductive and inductive reasoning, in order to arrive at rational conclusions.

Russell analysed the traditional and fundamental problems of Euro-American Philosophy, and paid much attention to his attack against Idealism,[18] before he emerged with the apparently simple and sceptic conclusion that all knowledge cannot be justified by pure reason without leaving some doubt in the reflective human mind. All knowledge, according to his observations, must be built on what he called instinctive beliefs, and if these were rejected, nothing would be left.[19] Tempels, on the other hand, observed several aspects of the traditional life of the Baluba, then described his observations analytically, before he rounded off his book with the generalised and far-fetched assertion that the Fundamental Concept of all Bantu-speaking peoples was Vital-Force.[20] For Tempels, the term "Bantu" was an ethic category,[21] and the Baluba constituted a stereotype of his philosophical and religious pre-suppositions of that category.[22] Modern research, however, has established that this term can only be accurately applied as a linguistic category, and not as an ethic one.[23]

John Mbiti contends that the fundamental concept underlying all the religious and philosophical foundations of Africans do not conceive of the future. They only think of the past and the present. This assertion demands a critical scrutiny. Although it has been acclaimed by some Euro-American scholars as one of Mbiti's most original contributions to the study of the African Religious Experience, it remains open to discussion and serious criticism. Mbiti himself accepts this.[25] It may in the end be found, after further research, that what Mbiti calls "The African Concept of Time" does not occupy as central and primary a place in the African religious and philosophical experience as Mbiti's presentation of the African Concept of Time, and suggest that there is another concern which has a much more fundamental influence on the African Experience than Mbiti's view of Time, or Tempels' view of the Vital-Force.

The concern suggested is relation. This critical examination of the theories Experience of God, because the philosophical presuppositions of any person or community greatly influences that person's or community's understanding, experience and expression of Metaphysical Reality, including God.[26] The conclusion of this study includes the observation that the African Philosophical and Religious Heritage is also analytical in parallel with the Graeco-Roman heritage,[27] and that its variance with the latter is to be found in the fundamental concern of the two different traditions as may be illuminated by the type of questions which are asked about God, Man and Universe. Variance is also to be found in the fundamental presuppositions of the two different traditions.

Having stated the limits and problems examined in this study, it may be helpful to examine more closely and critically the hypothesis advanced by Placide Tempels, that the fundamental concept in "Bantu" Philosophy is Vital-Force, which influences and conditions all other aspects of life.

2. The Vital-Force Concept, According to Placide Tempels

Tempels' view is supported by J. Jahn, who tries to formulate the field

observations of Tempels into an African Ontological System.[28] In doing this he is greatly influenced by A. Kagame, from whom he adopts the four main categories of being Muntu, Kintu, Hantu and Kuntu. The category of Muntu includes all beings which are believed to have intelligence, including God, spirits, dead people who are still "alive" in the memory of friends, neighbours and relatives, and certain trees. Kintu is the category which includes all "beings" which do not act on their own, but which may be manipulated under the command of Muntu - such beings as plants, animals and minerals.

Thirdly Hantu is the category which constitutes the "being" of time and space. The fourth category, Kuntu, covers the "being" of "mode", and includes such states as beauty, laughter and sadness. For Jahn and Kagame, the common linguistic factor in these categories, NTU, expresses the Bantu concept of "being" or "force".[29]

While it may be true that the Bantu-speaking peoples share a linguistic stability of the factor-NTU as an expression of "being" or ontology, it is not accurate, as Tempels seems to insist, that Bantu-speaking peoples have a general word meaning "Vital-Force". In the English and other European languages, "Action" is a general category which is expressed in several different words, each representing a different aspect of Action. Examples of such words are: force, dynamism, vitality, strength, power, stamina, potentiality, and also deed. In the African languages, in contrast, the term "Action" with all its English connotations is represented by just one or two words denoting some practical application. When an attempt is made to translate the different English connotations of the term "Action" into African languages, there are not equivalents which suffice, and all those connotations are squeezed into the one or two African words available. The converse is also true: When an attempt is made to translate the African term into English, it fits into only one or two of the many connotations which are implicit in the term "Action". This problem is encountered in several other terms, including "Love" and "Salvation". Okot p'Bitek has noted this problem in one of his books.[30]

In the Embu language, for example, all the connotations of the term "Action" are expressed in two words. "rwtha" and "vinya". The first of these may be translated as "to do". The second, "vinya", may be translated as "strength". All the other shades of meaning implicit in the term are understood from the context in which the two Embu words are used.[31]

Both Vital-Force, in the usage of Tempels, and Universal-Force, in the usage of Jahn, are abstract concepts which may have linguistic and philosophical meaning in the Graeco-Roman tradition, but which find no equivalents or parallels in the African languages, religious heritage and philosophy. To claim, therefore, that Vital-Force is the fundamental concept of African religions and philosophy, is to project the personal thoughts and beliefs of Tempels, which developed from a different heritage, on to an actual African situation which is different both in tradition and in presupposition.

What may accurately be asserted about Tempels' view of the African understanding and experience of Force and Being is that Being is taken for granted, or presupposed and where Being is perceived, it is acknowledged.

This acknowledgement of Being as it is perceived, has an influence on the daily life of the African. African peoples perceived the power of God in the Universe, and acknowledge this perception. Their acknowledgement is accompanied by actions as the fulfilments of their religious beliefs and expectations.

3. The African Concept of Time, According to J.S. Mbiti

Before Mbiti begins his discussion of the African Concept of Time, he notes that his effort is

> "no more than a pioneer attempt which calls for further research and discussion."[32]

This study is another attempt at answering that call. Mbiti discusses:

> "the African concept of time as the key to our understanding of the basic religious and philosophical concepts."[33]

In summary, Mbiti's assertion is that "according to traditional African concepts, Time is a two-dimensional phenomenon, with a long past, a present and virtually no future".[34] An important question arises out of this assertion; is it accurate to assert that Africans do not conceive of the future?

The basis of Mbiti's conclusion is his observation that the Kamba, Gikuyu and Swahili languages do not have a word which means "future", whereas they have a general and relative term meaning "past". In Gikuyu and Kamba the term is "tene" and in Swahili it is "zamani". In all the three languages there is a term to represent the present, and Mbiti uses the Swahili term sasa, although there are different words meaning "present" in Gikuyu and Kamba.[35] Nevertheless, to draw such a conclusion from linguistic examination only, as Mbiti does, is to oversimplify African philosophical thought. The African understanding and experience of life and history is much deeper and much more complex than this conclusion implies. While it is true that Africans place much emphasis on what they consider and believe to be the important events in their past, it is also true that they feel bound by their experience to maintain the present and future social, religious and political beliefs and implications which those important past events cast on their understanding. This commitment is fully integrated and incorporated in the African understanding, experience and expression of God, Man and the Universe. The commitment to the past means to Africans that all the things they do in the present should ensure a future structure of the community which has a continued relationship with that past. Such a commitment cannot accurately be said to have its end only in the present. To assert that Africans do not conceive of a future beyond two years,[36] even among the Kamba, Gikuyu and Swahili whom Mbiti observed, is to imply in the same assertion that Africans do not have any traditional means or principles by which they ensure a perpetuation of their communities.

Yes, it cannot be doubted that many African societies have managed to perpetuate and expand themselves for centuries[37] without the aid of what Mbiti calls "the linear concept of time in western thought".[38]

The establishment and maintenance of social religious and political institutions has been instrumental in ensuring this continuity. Since the declaration of "political independence" in many African states during the seventh decade of this century, the history syllabuses and the educational curriculum in general have been revised, and in some of the states much emphasis has been placed on research and study of the African past.[39]

The colonial myth that Africans did not have any history before the advent of Europeans and Asians into the African continent has been discredited and even disproved by many modern African scholars.[40]

A few examples may suffice to illustrate that Africans conceive of the future beyond two years, although there may be no word to express a general concept of the future. Each African community, no matter how small, has its own traditional institution of marriage. Among many African peoples, perhaps all, marriage is a process, and not an incident. Although there may be an event to inaugurate the marriage relationship and involve the community, the relationship is continued in an established process which goes on for a long time, sometimes as long as three generations, so that the grandson participates in the process of a relationship which began with the marriage relationship between the in-laws in a process which never ends.

The saying expressing this belief is "Wthoni" ndwthiraga".[41] The Gikuyu and the Meru of Central Kenya have a similar system[42]. Another example is the institution of initiation. Among most communities, each individual whether man of woman undergoes initiation at each stage of life. The stages last many years, and each initiation demands the involvement and participation of all the members of the society, in one activity or other. From birth to death life is punctuated by established rites of "passage".[43] Political authority and succession is also established in each community whether the supreme office is held by a King or Council of Elders. Such institutions are not established to serve the community only for the present, but also to ensure its continuity into the future, and to maintain integrity.

Mbiti has observed that among Africans, time is reckoned in terms of significant events.[44] It may be added here that just as the past is marked by events which have been experienced, so is the future anticipated in terms of events which are expected to happen, affecting the family and the community as a whole. God is believed to have all the power over men, the Universe and Time: Just as He has held all power in the past, so does He know about tomorrow and the seasons and generations to come.

4. Relation as a Fundamental Concern in the African Understanding, Experience and Expression of God, Man and the Universe

"The question of time is of little or no academic concern to African people in their traditional life."[45]

In this observation Mbiti notes an importance of the African heritage. If two people meet each on their way to perform a particular function, the experience of their meeting and relationship is more important for them than the time they take in their greetings, conversation and

gestures.[46] The rush which is dictated by the tick of the watch and clock in Euro-American life is not characteristic of African peoples, who understand themselves in terms of relationship to their environment, including God, fellow men, ancestors, spirits and significant animals, plants and non-living things.

When something goes wrong in the experience of the African peoples, one of the fundamental questions they ask is "what have I done?" or "whom have I wronged?" This question leads them to the diviner, who is believed and accepted to be the professional consultant and adviser for the community.[47] The diviner, after his diagnosis, may observe that the patient or his kith and kin has broken the good relationship between him and God, the ancestors, the spirits or the traditions of the community. All Africans in traditional life, believe that nothing can be well with them if good relationship is not maintained between them and all the powers which are perceived in the environment. These include God, fellow men, ancestors, established institutions, and ritual animals, plants, non-living objects and special places. If the relationship is broken, then it must be restored before the situation can return to normal.

Broken relationships may result in individual or family drought, epidemic, earthquake, flood or locust raids.[48] The prevention and cure of these misfortunes includes not only physical prescriptions such as roots, leaves, fruits or powders from herbs, trees and minerals, but also ritual cleaning and sacrificial practices.

5. Conclusion

The foregoing observations lead consistently on to the conclusion that the African religious and philosophical heritage is characteristically based on physical experiential perception, rather than on mystical contemplation.[49] While the Graeco-Roman religious and philosophical tradition gives a primary position to such metaphysical questions as the nature of God, Man and the Universe, and expresses philosophical doubts as to the existence of these three,[50] Africans acknowledge what they experience, and the complicated problems posed in that experience lead them to ask such questions as what they may do to remain in good, healthy or prosperous relationship with the powers which they experience in their environment. The African Experience of God is directly involved in this concern, rather than in concepts of time. Relation is in deed, thought and expression,[51] a fundamental concern of African peoples in their religions, philosophy and social organisation.

Reference Notes

1. All aspects of life in contemporary Africa are conditioned by legal and other systems which were introduced into Africa from Europe and America through colonialism and neo-colonialism. The colonial system placed Asians, Europeans and Americans above indigenous Africans. African culture and religion were legally regarded inferior - as the lowest and most 'primitive' of all the traditions that came into contact with colonialism. The Law of Marriage in colonial Kenya is an excellent example, in which 'custom' marriage was 'ignored' if it was in conflict with 'Christian', legal or statutory, marriage. Hindu and Muslim marriage codes were acceptable and valid before Colonial Law.

2. A brief summary may be found in Mitchel, G.D., A Hundred Years of Sociology, Gerald Duckworth and Co. Ltd., London, 1968, chapters III and V.

3. Mbiti, J.S., African Religions and Philosophy, Heinemann, London 1969, pp.6-10 Mitchel, G.D. A hundred years of Sociology, chapters II and V.

4. This attitude has prevailed among some scholars in Europe and America. See Martin, D., A sociology of English Religion, Heinemann, 1967, p.11-12. Also, Cox, H., The Secular City, Pelican, 1965. Robinson, J.A.T., The New Reformation?, S.C.M.

5. These 'labels' were, and still remain, only comparative. They are not descriptive, but derogatory. For a discussion of these labels, see Rodney, W., How Europe Underdeveloped Africa, Tanzania Publishing House, 1972. See Davidson, B., Old Africa Rediscovered, Victor Gollancz Ltd., London, 1960, p.20. Also, Oliver R., and Fage J.D., A Short History of Africa, Penguin African Library, 1962, p.13.

6. His original work was written in Flemish. It was then translated into French by Dr.A. Rubbens, and published as 'La Philosophie Bantoue' in the Belgian Congo in 1945. The English translation was published in 1959 as Bantu Philosophy, by Presence Africaine, Paris. In most significant studies of African Religions and Philosophy a reference to this book has been made.

7. Tempels, p.169.

8. Mbiti, J.S., op.cit., pp.6-14. Many of the books cited are anthropological writings. See also, Parrinder, E.G. Religion in Africa, Penguin African Library, 1969, pp.7-10. In addition, see also: Parrinder, E.G. African Traditional Religion, S.P.C.K. London, 1962.

9. Meyer Fortes, Social Anthropology at Cambridge since 1900, Cambridge. Also, Okot p'Bitek, African religions in Western Scholarship, East African Literature Bureau, 1970, pp.105-106.

10. It is significant that these writers were interested in the indigenous people of the colonies in what now is degradingly called 'Third World'. See Okot p'Bitek, op. cit., pp.34-39, 107.

11. Dr.Terence P.Day, in his Lecturers on the Religious Experience of Mankind at the University of Nairobi, July to September 1972, suggested that these categories, should more accurately be regarded as types rather than phases in the development of the religious Experience of Mankind. His view seems more applicable to the actual nature of all the religions of the world, because regarded as types, these categories are to be found in every religion, in varying degrees.

12. For example: In West Africa, the position of the Chief in the Modern Political Systems of the Ashanti, Oxford 1957, by Busia, K.A. in West Africa, and Kenyatta, J., Facing Mt.Kenya, London, 1938. Such writers hoped to express the ignored wishes of the majority of

Africans, who had been denied academic education, political and economic freedom, respectable self-determination and self consciousness, and human dignity. In Post-Independence Africa, a continuation of that tradition is supported by a category of writers whom Okot p'Bitek calls "African nationalists fighting a defensive battle against the vicious onslaught on African Cultures by Western Scholarship." Okot p'Bitek, African Religions in Western Scholarship, p.40. Also, Welbourn, F.B., East African Christian, O.U.P., 1965. Also Taylor, J.V., Primal Vision, S.C.M. London 1963, chapter 2.

13. See Okot p'Bitek, op.cit., p.54. Also Taylor, J.V., Primal Vision, S.C.M. London 1963, chapters 1-3. There is now no doubt that the Missionaries, as well as the Colonialists, believed it was necessary for the traditional African Self Image to be destroyed in respect and favour of the European way of life, so that they might find it easier to colonise, rule, civilize and exploit. See, for example Westermann, D., Africa and Christianity, Oxford 1939, p.94. Also, Okot p'Bitek, op. cit., p.55.

14. The European-American Tradition as a whole is mainly based on Graeco-Roman foundations. See Russell's, B. History of Western Philosophy, George Allen and Unwin Ltd., second edition, London 1961. Introduction pp.13-22 also pp.44-48.

15. This is an extension of the Greek background of Euro-American Philosophy, in which each City State regarded itself as the centre of 'civilization', surrounded by a 'pagan', 'savage', and 'barbarian' environment. Philosophers in the city states theorised about the unknown environment, without paying much attention to what the 'barbarians' might have to say about themselves and their own backgrounds. See Taylor, J.V., Primal Vision, S.C., London 1963, p.24. Bertrand Russell has noted clearly that objective judgement is not possible. See Russell, B., op.cit., pp.750-751.

16. Mbiti, J.S., African Religions and Philosophy, Heinemann. London 1969. Concepts of God in Africa, S.P.C.K. London 1970.

17. Senghor's works are many, but for a brief introduction, see Leopold Sedar Senghor: Prose and Poetry, edited and translated by John Reed and Clive Wake, O.U.P., London 1965.

18. Russell, B., Problems of Philosophy, Oxford Unviversity Press, London 1959. Also History of Western Philosophy, p.590-591, 675-690.

19. Russell, B., Problems of Philosophy, pp.11-12.

20. Tempels, P., Bantu Philosophy, pp.44-45, also p.175.

21. Tempels, P., pp.22-25, also pp.33-38.

22. See The Growth of African Civilization, Volume I, Longman Group Ltd., 1968, pp.13-16. Also, pp.196-200.

23. Tempels p.101.

24. Mbiti, J.S., African Religions and Philosophy, pp.15-28. New Testament Eschatology in an African Background, O.U.P., London 1971, pp.24-32. For example, Dr.Malcolm Mcveigh in his Lectures on African Religions, University of Nairobi, September 1971 - January 1972.

25. Mbiti, J.S. African Religions and Philosophy, p.16.

26. Mbiti, J.S. African Religions and Philosophy, p.16. Bertrand Russell makes a similar observation when he writes: "The Catholic Church was derived from three sources.

    Its sacred history was Jewish, its theology was Greek, its Government and Canon Law were, at least indirectly, Roman" See History of Western Philosophy, p.19.

27. It is not necessary to insist, as J.D.Fage tries to do, in A Short History of West Africa, Oxford University Press, that some peoples

of Africa adopted their institutions from Europeans and Asians with whom they came into contact. It seems more accurate and reasonable to accept the view of J.S. Mbiti, that "The African Soil is not so infertile that it cannot produce its own ideas. This game of hunting for outside sources is dying out." African Religions and Philosophby, p.6.

28. Jahn, J., Muntu, German Edition 1961, English translation, London 1961.

29. Mbiti, J.S. African Religions and Philosophy, p.11.

30. Okot p'Bitek, African Religions in Western Scholarship, pp.84-85.

31. From findings of my own research on Embu Religion and Philosophy, hitherto unpublished.

32. Mbiti, J.S. African Religions and Philosophy, p.16.

33. Mbiti, p.16.

34. Mbiti, p.17.

35. Mbiti, p.18.

36. Mbiti, p.19.

37. See, The Growth of African Civilization, Longman Group Ltd., 1968, Vol.1.

38. Mbiti, p.17.

39. For example, Kenya, Tanzania and Nigeria.

40. For example, Professor Bethuel Ogot, former Head of History Department, University of Nairobi, see Fage,J.D. (ed.) Africa discovers her past, Oxford 1970, chapter 10. A critique of this debate may be found in Professor Ali Mazrui's article, 'The Written Word and Collective Identity, in East African Journal, Vol.9, No.5, May 1972.

41. From findings of my own research on Embu Religion and Philosophy hitherto unpublished. The orthography of the Embu language has not yet been standardised. So far, only one book has been published in Embu: Mwaniki, H.S.K., Ndai, Ng'ano na Nthimo Iri Ukua wa Aembu. Mwaniki has used the Gikuyu Orthographic System, which in turn was adopted at the beginning of the century from the English five-vowel system. Findings of my own research suggest that a new Orthographic system is needed, with a wider spectrum of vowel sounds. The saying cited in this note is recorded in my own suggested orthographic system. 'W' in each appearance stands for a vowel sound which is near the sound as in board and in hoar.

42. See Bernard, B., The Mugwe: A failing Prophet, Oxford University Press 1959. Also Kenyatta, J., Facing Mt.Kenya, London 1938.

43. Mbiti, J.S. African Religions and Philosophy, chapters 11, 12 and 13, pp.110-165.

44. Mbiti p.19.

45. Mbiti p.16.

46. Kaunda, K.D. A Humanist in Africa, Longmans, London 1966, pp.31-36.

47. Mbiti, African Religions and Philosophy, p.177.

48. Mbiti, p. 44.

49. Mbiti has implied this in his observation that "Broadly speaking, African thought forms are more concrete than abstract." - African Religions and Philosophy, p. 30. However, this observation needs to be accepted with caution, because thought cannot, accurate, if "concrete" refers to material form. In describing the quality of African thought, perhaps the term "concrete" is not quite appropriate.

50. All the notable philosophers of the Graeco-Roman tradition have tried to wrestle with such metaphysical problems. There are many examples of such philosophers - Plato, Aristotle, Plotinus, Kant, Hegel, Nietzsche ... any listing of examples is arbitrary, and can be long.

51. Even in social terms RELATION is a very important concern in the African experience. A study of the African Relational Systems has not received much scholarly attention in the past. Perhaps some more research on this subject may yield revealing observations. For Social Relations, see Mbiti, African Religions and Philosophy, pp. 100-109.

CHAPTER FOUR

SOME REFLECTIONS ON MAN'S VALUATION OF MATTER IN RELATION TO DURATION AND SPACE

1. Introduction

Humankind is probably the only species that attaches religious, political, ethical, economic and aesthetic values to the natural environment. This approach to nature enables humankind to establish an "artificial" or "artefactual" environment, which collectively can be called CULTURE. Concisely, culture may be defined as the comprehensive manifestation of all basic values sustained in the context of a particular society in a particular geographical region at a particular period of history.

Thus religion (metaphysics), economics, politics, ethics and aesthetics are the five pillars of any people's culture. Technology is the systematic management of each of these pillars, and of the inter-relationships between the pillars in time and space - in historical and geographical contexts.

Language is the first technological achievement of humankind in the processes of cultural formation and transformation. This technological tool enables human beings to exchange ideas in order to deal with the natural environment at the second-order level of analysis, valuation, transformation, exchange and disposal.

Through language humankind reflects and exchanges ideas about the potentiality of the natural environment. Language as a tool also enables man to consider various approaches to the natural environment - use, abuse, misuse, overuse, and so on. Whereas other animals are compelled to migrate when the natural environment becomes inhabitable, humankind is capable of preventing the destruction of local habitats, reclaiming inhabitable areas for settlement, and also destroying habitable environments through technological processes that pollute faster than the capacity of nature to restore ecological balance. Language makes it possible for interaction to be effected between experts in various technological fields, and such interaction may help mankind to prepare for a more promising future that is less destructive and more culture-affirming.

It is becoming increasingly clear that the task of adequately preparing for the future, with lessons from both past and present can be best accomplished through interdisciplinary consultation and reflection. Land Economics as a discipline, for example, has a great deal to contribute to other disciplines with regard to clarifying the principles of land valuation. The notions of "Land" and "Valuation" however, extend beyond the concept of real estate, to attitudes, traditions, interests, beliefs, customs and world views. Thus the clarification of land-valuation principles can in turn be greatly enhanced by interactions between Land Economics and such other disciplines as Philosophy, Theology, History and Anthropology. This paper presents some reflections from a philosophical perspective on man's valuation of matter (with specific reference to Land) in relation to duration and space.

2. Valuation and Matter

The notion of valuation itself needs to be discussed. Valuation refers to the quantitative and qualitative assessment of property. Man considers that some things are more important than others and should be "valued" to be more "expensive" than others. Value is logically prior to the instruments of valuation. When someone asks a valuer to establish the value of his property, the initial assumption is that the property is valuable, and the valuer is capable of valuing it. Valuing has to be done in relation to the established standards of measurement and costing. These standards are culturally evolved and accepted.

One of the problems of valuation in Africa is that traditionally owned property is valued according to standards from alien cultures. Monetary, linear, weight, volume and capacity units that are now in use, were introduced during the colonial period, and many people have hardly become used to them. The change from the British Imperial to the Metric System still confuses many people in Kenya. What is the difference between an acre and a hectare? In the first place, the acre was relatively a new standard to which many people were not used, then it was replaced by the hectare. What is the real value of a shilling? Few people would think of a shilling in terms of the labour that is used to earn it. It would be interesting to establish the equivalent of a shilling in terms of the drops of the human blood or sweat that would be expended to earn it.

The valuation of matter depends on the standards of measurement, on the understanding of the valuer, on the demand of the commodity being valued, and also on the intrinsic qualities of that commodity.[2] In reality and in practice, differences in the value of commodities are extrinsic to these commodities. Take two pieces of land, for example. The piece A and the piece B may have the same acreage and be located in the same zone, have the same soil texture and in almost every other respect be similar. Yet many people may prefer piece A to piece B, and for this reason piece A becomes more expensive. The value of piece A rises through the qualities that are external to it. For this reason, valuation depends on the "market conditions", probably much more than on the intrinsic qualities of the commodity in question.

Processing is another factor that affects valuation. Processing is all the improvement that is done on a commodity to change it from the "raw" condition to the "developed" condition. For example X may buy a piece of land and then build a house on it. When he sells the land later, the house may be many times more than the original value of the land. The land itself will have appreciated in value because of the development. Likewise commodities, such a coffee, tea and maize are much less valuable when raw, than after processing. How is the value of processing calculated? Apparently, no theory can settle the problem of fixing the cost of processing. Consequently, the value of processed matter is fixed by the person who owns the processed product, depending on the strength of his bargaining power. If he can hold on to the commodity until the demand increases, he may be able to raise the value of the commodity considerably. Technology becomes a major factor.

Matter may be categorised for valuing purposes, in terms of its importance with regard to basic necessities in an environment. For example, land which is potentially capable of providing food crops is

more "valuable" than arid land. However, among pastoral peoples, ranching land may be considered to be of greater value than agricultural land. Areas that are accessible, especially in places where water is a scarce commodity, are more valuable than remote ones. Theoretically basic foods should be more valuable than supplementary foods. Basic grains, proteins and vegetables are in theory more valuable than supplementary foods such as coffee, tea, cocoa, pyrethrum and spices. Yet in practice, these supplementary foods become more "valuable" even though they are not mostly consumed by the people who produce them. The value of such supplementary commodities is very vulnerable, because the prices are determined by the consumer rather than by the producers. In theory, the producer should set the initial value of his commodity, but in practice many people in Africa are unable to set such value. One of the reasons for this situation is that the modern units and standards of valuation are culturally alien to the traditions of African peoples.

The valuing of matter may be effected by the services that are associated with it. Land which is accessible to a major road, to mains electricity, to telephone lines, to schools, hospitals and shopping centres may be more valuable than land which is not accessible. The relative distance to such facilities brings differentiation to land values. Yet among the people to whom such services are still relatively insignificant, the land value may remain relatively low. This may explain the main differential between land values south and north of Nairobi, respectively. Land is much more expensive north and west of Nairobi, than south and east of the city, even for equi-distant locations. Owing to different valuing considerations between sellers and buyers, there is a likelihood of deception, especially where foreign units and standards of measurement and valuation are concerned. For example, an old man may think that one hundred thousand shillings is very much money in exchange for five acres of land. He may not, however, realise that whereas land is not affected adversely by inflation, money depreciates with time. This observation leads us to consider duration as an element in the valuation of matter and space.

There is need to understand the traditional African valuation practices in order to bring them into consideration when applying modern valuation standards. After all, most of the land is still traditionally owned by people who do not yet fully understand modern methods of value and tenure.

3. Land and Valuation as a Technical Concept

Analogically, "valuation" may be viewed as a "linguistic" exercise. According to this analogy, a valuer is an interpreter who establishes effective communication between a prospective seller of real estate and a prospective buyer of the same, in an economic situation where non-experts are not fully conversant with the market conditions and considerations. For such an interpreter to be effective, he needs to comprehend the "language" of both the parties who intend to "communicate" with one another, with "communication" understood as a successful transaction that is mutually favourable. Comprehending these languages demands full knowledge of the interests, attitudes and capabilities of both the prospective buyer and seller. The valuer also needs to be fully conversant with the cultural environment in which this prospective transaction will be conducted.

In contemporary Kenya (as an illustrative case), reviewing valuation of real estate in the analogical way (as a linguistic exercise of interpretation) evokes many complex issues that are worth discussing in detail. It is not possible to exhaust any of them here, but a few indicators can be highlighted.

Most of the land in Kenya's rural areas is held in tenures based on the traditional African world-view and cultural values. Some of the land has been surveyed, demarcated and registered under a "modern" system of tenure in which land "parcels" are owned within such categories as trusteeship, leasehold and state ownership,. The traditional African systems of tenure are much less money-oriented because they are based on an economy of commodities rather than money.

The duration of tenure in these traditional systems is time-less, in the sense that the relationship between man and land cannot be changed. Both the individual and the community hold land in trust as a means of deriving a livelihood and affirming human identity and dignity. However, absolute ownership is impossible, in the sense that only God can claim to own land absolutely. Any transactions on land are conducted on this understanding, and for this reason traditional valuation systems are free from speculations for the purpose of profit. An individual clan or community may hold land in trust for generations, on understanding that no one ought to alienate that land from this permanent trusteeship. However, this traditional African approach to permanent trusteeship is much different from the modern system of titled tenure.

The transition from the traditional African land tenure to titled ownerships tends to generate much confusion, especially on the part of those who wish to purchase land with money, a plot is a commodity to be bought and sold. To those who have inherited land from their ancestors, however, a plot is held in trust, awaiting to be passed on to the next generation in an endless process of communal and family life.

Owing to the colonial background of the title ownership system, untitled land tends to be valued much lower than titled land, in terms of monetary valuation. A person who holds land in the absolute and leasehold categories can sell, or lease the property as he chooses - he may even give it away. Once the transfer documents have been registered, the new owner may in turn do as he chooses with the newly acquired property. Someone who sells a piece of land for money may spend or lose the whole or part of this money on the same day, but ownership cannot be reversed, unless the new owner chooses to resell at a new price.

In a situation as this the challenge is to discern a system of valuation that would reflect the "language" and interests of both the traditional African, and the titled systems of tenure, without any detriment to either. A starting point in dealing with this challenge might be to consider language as the expression of a world-view. The traditional value-system is based on a world-view in which no individual person, society or nation can claim absolute ownership to some things in the natural environment - such as land, forest, water, rivers, lakes, oceans, mountains, swamps, fountains, springs, and so on. Nevertheless an individual would be respected or rewarded for his creativity and intensiveness. The appropriation of the natural environment for cultural purposes would be based on strict adherence to a world-view in which the

whole of nature is believed to be shared; human beings would be regarded as integral with, rather than apart from, nature.

Ritual would accompany interaction or transaction on nature that might in any way affect the cultural or natural ecological balance of a particular habitat. Thus the stability of the natural environment was based on a balance between cultural activity and natural processes of restoring ecological balance. Though no industrially manufactured monitoring devices would be used, there were sophisticated methods of discovering when the ecology was disturbed, and solutions were readily available through migration, restore-action or control. From the perspective of industrialised manufacturing, such an approach to nature might appear "primitive" but considering its philosophical basis, its inner logic and consistency is admirable.

Philosophically, a convergence of the two world-views (the traditional African and the modern) may yield a new system of land valuation that has the possibility of being less money-oriented but positively disposed towards the promotion of production and productivity. The details of such a system if it is a practical possibility, would have to be elaborated with much care and thoroughness, so as to include all necessary considerations.

The modern titled ownership tends to lay more emphasis on the "parcel" than on the land. Thus the documentation in the registry seems to mean more to a bank or a borrower who uses the parcel as security, than the actual land with everything on, over and under it. In monetary terms, what seems to matter most is the valuation attached to the parcel in the officially registered documentation. The traditional system of land tenure, on the other hand, is authenticated by ritually sealed covenant relationship, duly witnessed by representative members of the families, clans or ethic communities involved. Under the traditional system it cannot be valued in definitive terms - it can only be valued in symbolic or analogical terms. Money in modern transactions is a "sign" which does not point beyond the value of the object whose value it expresses. There is nothing fixed about the valuation of money itself, in relation to natural and cultural commodities. The exchange of livestock, honey, kola nut, tobacco or other ritual items in traditional transactions, is an expression of symbolic action which seals communal relationship intended to last and to be sustained for endless generations to come.

A convergence between these two approaches to the medium of economic exchange, may lead to the promotion of a system of land valuation in which land is exchanged for other real estate, or for services, without necessarily attaching any monetary indicators to any aspect of the transaction. Again details would have to be carefully considered concerning the implications of such an alternative system.

This section points to the possibility of several alternative systems of valuation, which would be valid each within its particular context. Specifications for the appropriate contexts would have to be stated for each alternative, to avoid further confusion.

4. Valuation of Duration

One of the factors that differentiates land values is the length of

tenure. Some land zones are scheduled for freehold titles, while others are set aside for leasehold and others are held as government property. The freehold title is absolute and "everlasting" as far as duration is concerned. However, it is not absolute as far as transfer of title, because the owner of a freehold parcel can sell it or transfer it to someone of his own choice. It is also not absolute because the land can be appropriated by government for a public utility such as a road, hospital, school, airport or town. In some countries (including Kenya), an absolute title is also limited to the top soil, because any valuable minerals under the particular piece of land would be a national resource. Aircrafts and satellites can fly above one's piece of land without being considered to violate absolute title. The aspect that concerns us here, is that of the duration implied in the scheduling of titles as freehold and leasehold.

First it is worthwhile to discuss the notion of duration. It is more appropriate to use the term "duration" rather than "time", because "time" is a specific method of measuring duration. Duration can only be understood in relation to matter and space. We would be able to understand the notion of duration without reference to objects or phenomena existing for comparative lengths of time. Our own lives enable us, human beings, to appreciate duration. At one time we are babies. Then we grow up through adolescence, until we become almost like babies in our senility. During one day we experience many different situations both within and around ourselves. We wake up feeling sleepy and hungry. After breakfast we go to work and soon we are hungry again. If we work too hard we get tired and may feel sleepy even before darkness sets in. Around us, the sun helps us to experience duration - we are aware of morning, midday, evening and night. We are also aware of lunar movements and of the seasons.

The measurement of duration is directly related to the world view, the religion and the culture of people among whom one has grown up. Sometimes several systems of duration measurements are used simultaneously - or as we might say, synchronically. Schooled Christians in Kenya, for example, may use three different systems without consciously recalling the process involved:

1. The Swahili Bantu System
   (a) The day begins at dawn and ends at dusk
   (b) The night begins at dusk and ends at dawn.

2. The Biblical - Hebrew: The day begins in the evening and continues through the night to the following morning. Sabbath, for example, would begin on Friday evening and continue throughout till Saturday evening at dusk.

3. The Modern-Sientific: The day begins at midnight and continues until the following midnight.

Thus when someone makes an appointment in English, at 3 o'clock in the afternoon, he would mean the ninth hour of the day if the appointment were expressed in Kiswahili or many other African languages. This is not merely a difference in language - it is a difference in world views.

Another example is discernable in Biblical Scriptures. Some numbers and

their multiples keep recurring in both the Old and the New Testaments. God is said to have created the world in six days and rested on the seventh. The seventh year in the Hebrew Tradition should be set aside for resting the land and resting the servants. All bonded servants are expected to be freed in the seventh year. The forty-ninth year was the year of the jubilee, when all things would be restored to balance with great celebration. Multiples of seven and cycles of seven, were considered a perfect period for planning. Joseph planned to avert famine for seven years when he worked for Pharaoh in Egypt. Such seven year planning saved other people from starvation.

The decimal cycle has been adopted in Africa since the colonial period. Land tenure, where leases are held, is scheduled in multiples of ten - 49 years (50), 99 years (100) and 999 years (1000). The rationale for this system may have been understood by those who introduced it, but many people in Africa do not understand the school-learnt sense of duration.

In view of this historical background consider an old man whose agricultural land is rescheduled from freehold to leasehold as a result of urbanisation. It may be explained that he needs to pay land rents and rates to the Government and to the local authority, but he will find it difficult to understand why this has to be done. Those who appreciate the process of urbanisation, (and perhaps secularisation also) may understand what is involved, but the majority of people in Africa, who still live in rural areas, will remain relatively ignorant of this change in the sense of duration.

Freehold land tenure tends to be more expensive than leasehold or state land. Yet the scheduling of land into these categories is not intrinsic to the land itself. It is also probable that in the contemporary situation in Africa, freehold land is relatively more expensive owing to the fact that land rent does not have to be paid, rather than because of the absoluteness of the title holding.

Several questions arise from the foregoing observations. What system of duration would be most appropriate in the valuation of property in the African (or Kenyan) situation? Could there be planning periods more appropriate to the African situation than the five year period? (Most National development plans in Africa are for four to five years). How could valuation practice be adjusted to synchronize with traditional African understanding of duration? The answer to these questions demands a thorough understanding of the African heritage.

It is worthwhile to emphasise on culture as an important context for the understanding of a particular notion of duration. A people's world-view, for example, will determine whether duration is calculated with reference to solar, lunar or stellar cycles. Combinations of such cycles are also possible, depending on the operative world-view. In the Hebrew cultural heritage, several systems are shown to have been used, if one considers the various notions of duration in both the Old and the New Testaments. This plurality may in part be due to the influences which the Hebrews have acquired in their long history.

Likewise, a people's view of history greatly influences the understanding of duration that is predominant in its corresponding culture. The Christian calendar, for example, takes the event of the birth of Jesus as

the turning point of history. The Muslim calendar, on the other hand, is centered on the flight of Mohammed from Mecca. Whereas the Christian calendar is calculated on the solar cycle, the Muslim one is lunar. The view of history predominant in the African heritage is not founder-centered, even though African peoples have their heroes and founders. Nor is this view eschatological, in the sense of anticipating an end of the present order and the establishment of a new one "beyond history". All relations must be perfected within one's lifetime, because beyond physical death there can be no chance of repentance or forgiveness.

It is interesting to note that the African cultural heritage permits for land transactions to continue over generations especially because such risks as absolute tenure, inflation, interest, profit and speculation are irrelevant to land valuation over any duration.

The challenge today, then, is to discern systems of valuation that might stabilize any transactions in such a way that speculation is reduced or if possible, totally eliminated. Lessons from the traditional African approach to land tenure and land valuation in relation to duration, might yield interesting insights for the design of such a new system.

It is, of course, impossible to adopt in totality, any particular traditional African approach. Of much greater relevance, is the challenge to discover the value, and philosophical principles on which the various approaches would be based. Such principles and values might still be valid or useful, even though the practices based on them may have become obsolete.

Cultural obsolescence is normal in human history, and the past is useful only to the extent in which it facilitates a cultural renaissance, especially after a people's culture undergoes a period of decline. During the colonial period Africa's culture was suppressed - there is a possibility of renaissance as Africa enters the twenty-first century.

5. Valuation of Space

Space is perhaps the most elusive of all the elements in valuation. The notion of space, like that of duration, cannot be understood without reference to matter. One of the qualities of matter is that matter occupies space. Even the smallest atom occupies space. A vacuum is defined by the limits of the matter enclosing it. Thus without material bounderies the notion of a vacuum would be impossible. Matter can be defined in terms of the space it occupies (volume) and in terms of how long it lasts (its durability). Density is the specific method by which the volume is calculated. A substance with a high density will be heavier per unit volume than one with a low density.

In the valuation of land, the notion of volume does not seem to be as important as that of area. Rarely does one talk of the cubic volume of the fresh air that goes with a piece of land. Nor does one refer to the volume of the earth's crust which lies beneath a piece of land that is being valued. Yet space when it is understood in terms of volume rather than area becomes tremendously valuable. The problem is that valuing property in this way may bring so many variables that there would be no standard. For example, the winds that blow across a particular location cannot be predicted exactly, even though the general micro-climate of the area may be known.

Earlier we observed that land tends to increase its value depending on considerations by those who are interested in it. An improvement in the environment of a certain location may suddenly escalate the value of the land in that location. This observation suggests that one of the keys to the specification of land, is the improvement of the environment. Improvement here does not refer to urbanisation since urbanisation has often led to the destruction of the environment. Improvement may mean natural environmental conservation and protection. It may also mean scheduling land and adjudicating it in such a way that the natural habitat is not destroyed by human settlement.

The allocation of space in areas where there are pressures of settlement is one of the most sensitive issues in any country. In North America, millions of people died as one group encroached on the settlements of another. The same happened in South America. In Southern Africa, the crisis of settlement is still unended. Every continent has been the scene of bitter struggles over land. What kind of policies would minimise confrontation and ensure maximum fairness in the allocation of this vital resource? In traditional African tenure, the notion of holding-in-trust was considered the fairest system. People could hold land and conduct transactions, but absolute ownership was impossible. Yet leasehold was not the alternative. It would be worthwhile to examine how the holding-in-trust could relate to modern practices of valuation and allocation of space.

6. The Matter-Duration-Space Combination

Today, in the age of specialisation and compartmentalization, there is a tendency to value and sell and buy matter, duration and space as separate commodities. When one goes to a shop to buy a shirt or dress, rarely does one pause to consider the land on which the cotton was grown, the time it took to process the wool, and the effort and skill that made the finished product. If the garment is made of synthetic fibre, rarely do we pause to consider how long it took for the crude oil to form, and how much vegetable or animal matter must have perished to produce the fibres making the garment. Too often, we are so interested in a commodity that we forget the process that has made it possible to produce it. If such considerations were brought into the valuation process, the cost of coffee, tea, sugar, rubber, cloves, cocoa, and other cash crops, would be considerably higher! - And they would be more just because of appreciating the integrity of creation.

Time has also become a commodity for sale. Employment in modern establishments is calculated in terms of hours per day or per week, and the employee is expected to do a minimum specified task within the unit time. This way of valuing duration dehumanises, because human beings are analogically likened to cogs in the machinery of a factory. They are valued according to their productivity within a specific period of time. When their productivity drops as a result of ill health or aging, they are dropped from the system. When duration is brought into consideration as an element in valuation, some land becomes more valuable than some other land merely because of the scheduling of respective locations. Yet the land in all locations remains part of the earth's crust unless, of course, it is transformed by earthquakes, volcanoes, landslides or floods.

Space understood as area, has also become a commodity for sale at high

prices. It is true that storage, cargo and factory space may be bought and sold in terms of volume, but the basic consideration is the area upon which the main plant or business is located. Infinite volume suspended in space is not a subject for valuation (yet).

A comprehensive approach to valuation would consider the traditional African approach to matter, duration and space integrally because each of these notions can best be understood with reference to the other two. New notions may have to be introduced into valuation policies in order to make the work of professional valuers more relevant to the thought systems of the majority of African peoples. Family attachment to ancestral land for example, remains an important traditional value, and modernisation may not erode it soon. Yet it need not be eroded. Such a value could be incorporated into value considerations.

7. Money as a Qualitative Notion in Valuation

All valuation today tends to be expressed in monetary terms. The currencies of the countries of Africa, Asia and Latin America (AALA) are so unstable that valuation of assets in those currencies has become unreliable. So there is a tendency to express the valuation of assets, liabilities and surpluses (profits) in terms of foreign currencies which are more stable. This is an unhealthy situation, especially with regard to the valuation of real estate.

Traditional African practices of valuation depended neither on money nor on foreign units of qualitative assessment. Property was valued in relation to other property. This was a closer approximation to real value of the properties at stake, because the people involved could relate their transactions to their direct attachment to those properties. Speculation was minimised in those practices, because no one would buy or sell real estate when estate merchants became interested.

"Barter" as a method of estate valuation deserves attention and study and may provide an alternative to monetary valuation. Money is deceptive, because it appears as property while it only becomes property after capitalisation. The person who buys real estate in exchange for cash is at an advantage, unless the seller immediately capitalizes his money to replace his 'lost' real estate. This is not as a method of property exchange especially where banking facilities are involved. Yet the deceptive character of money must be carefully watched by all those who do real estate transactions through this medium of economic exchange.

8. Conclusion

In this chapter, only preliminary observations have been made concerning matter duration and space as elements in valuation. The chief action in valuation practice, is man. By definition, man is a cultural animal, and all valuation practice has to be done within a particular cultural environment. The problem is that much of valuation has to do with natural resources, but the considerations are cultural ones.

When two or more cultures are in contact, those who own the natural resources risk losing those resources through unbalanced deals, unless they thoroughly understand the interests at stake on all sides. It seems that one of the priorities as regards valuation in Africa today is to

educate the majority of the population, to understand the implications of exchanging natural resources for money, for processed commodities, and for services including consultancy. Whereas natural resources are of long-term production value, rated in monetary profit which the consumer is expected to pay, money devalues every moment that it is not capitalised.

CHAPTER FIVE

THE THEORY OF EVOLUTION AND THE DOCTRINE OF CREATION

1. Introduction

To some people, especially those who have been brought up under Christian indoctrination and then exposed to modern empirical science, there seems to be a great conflict between the Christian doctrine of creation and the scientific theory of evolution. The aim of this presentation is to discuss this apparent conflict, in order to show that there is no necessary conflict between these two views regarding the origin and subsequent development of the universe. Our starting point in this discussion is the observation that there is a great difference between scientific theories and religious doctrines. Religion and empirical science respectively, belong to two different modes of thought and expression,[1] even though they both reflect about the human race and its place in the universe.

Empirical science formulates laws, theories and hypotheses. It does not articulate doctrines. Religion, on the other hand, is based on doctrines, not on theories, hypotheses and scientific laws. But what is the difference between a scientific theory and a religious doctrine? To answer this question it is necessary to comment briefly on the main concerns and procedures of investigation in both science and religion, respectively. Let us begin by examining the concerns and procedures of empirical science.

The main concern of empirical science is to acquire more empirical knowledge about the physical aspects of the universe. It is not concerned with the non-physical aspects of the universe. Only those aspects of reality which can be investigated empirically, are within the scope of empirical science.[2] The procedure which scientists employ in investigating the character of physical reality involves measuring, weighing, observing, tasting, smelling, touching and hearing. Thus the sense-data received directly from the five senses of sight, smell, touch, taste and hearing, supply the scientist with the basic information on which he bases his empirical description of the universe. Specialization enables expert scientists to probe deeply into the minute details of the objects which are the targets of their investigations. Precision instruments have been invented and improved continuously for the purpose of facilitating the accurate reception and recording, preservation and processing, analysis and calculation, of the relevant empirical data in which scientists are interested. Scientists have also developed, and occasionally refined, physical and theoretical models for consolidating and simplifying the voluminous data they have accumulated.[3] At the theoretical level, accumulated empirical data are consolidated by formulating general theories which summarize the character or behaviour of certain physical objects under specified physical conditions. Scientific knowledge is thus integrated in scientific laws, theories and hypotheses. Various renowned scientists like Johann Kepler, Galileo, Isaac Newton, Charles Darwin, Albert Einstein and others, formulated theories and laws to summarize the conclusions of their research. Students of the history of science are aware of the numerous laws and theories (most of which are named after their original authors) which explain the natural character of the various things these scientists had investigated.[4]

A scientific theory is always tentative. It remains valid as long as no new empirical evidence is discovered which contradicts the assertions of that theory. If such new evidence is discovered, the theory in question may be modified to account for the new information, or abandoned altogether in favour of a newer theory. Furthermore, scientific theories and laws are objectively and universally applicable. This condition implies that if the specified environmental situations dictated in a scientific law are strictly observed, the conclusions asserted in that particular law should be confirmed, irrespective of when and where the experiment is conducted, and irrespective of who conducts it.[5]

A new generation of scientists builds its investigations on what earlier generations have done, confirming, modifying and abandoning older theories, as well as formulating new ones for future generations to confirm, modify or abandon. Thus a scientific law or theory, even when it has been universally accepted as valid, remains theoretically tentative, allowing for possible modification or refutation, should any new empirical evidence contradict its assertions. We shall soon show that these features do not apply to religious doctrines.

Religious doctrines are mainly concerned with absolute values, rather than with minute details of empirical description.[6] This point makes religion radically different from emprirical science. A religious doctrine affirms its supporting community's self-evaluation in relation to reality as a whole. Such self-evaluation may be expressed in terms of the community's realized sense of inadequacy, imperfection and finitude. A religious doctrine offers an absolute and affirmative solution to this realization. In Judaism, Christianity and Islam, for example, the doctrine of God's absolute power over man and nature affirms absolutely that man can attain release (salvation) from these limitations only if he submits totally to God, who is believed to be the creator of the entire universe.[7] In Buddhism, the doctrine of God is not so central. Rather, the most important doctrine of Buddhism is that man is limited by his insatiable desires, for which he uncontrollably craves. If he can transcend his craving by controlling it, he will be able finally to overcome his limitations. In his physical condition man may be able to control this craving, through strict discipline in word, action and thought. According to the central Buddhist doctrine, absolute control of all craving will enable a person to enter the state of Nirvana, the state in which there is no desire of any kind. In the state of Nirvana, to be nothing is to be everything. It is the state of absolute tranquility, in which to crave for nothing is to crave for everything that matters.[8] This may appear to be a negative doctrine, but it is important to note that Buddhism is a religion which has many followers especially in Asia, and it is the official religion in some countries, such as Thailand.[9]

In the African religious heritage, ultimate self-evaluation is expressed in terms of the community, which includes all ontological categories - God, spirits, ancestors, living persons, unborn generations, animals, plants and inanimate objects both natural and artificial. For a person to transcend his limitations according to the African religious heritage, he must live in harmony with all these entities which constitute his identity. If he breaches this harmony at any point, he endangers the identity of the rest of this extensive community, and by so doing he endangers his own identity. Thus everyone must endeavour to maintain ontological harmony with all entities which constitute his community. A person cannot be in harmony with God, if he is not at the same time in harmony with all other ontological categories.[10]

A religious doctrine is always claimed by its advocates to be absolutely and eternally true. The absolute authority on which this claim is founded, is believed to be supernatural and metaphysical. Theists claim that their doctrines are revealed to them (on to their predecessors) by God. Since meta-physical and super-natural entities are outside the scope of empirical science, no branch of empirical science can confirm or disprove absolute religious claims.

Another feature of religious doctrines is that they are sustained by communities to whom the doctrines are meaningful and relevant. Such communities take for granted the absolute demands which are an integral part of the doctrines. A scientific law does not need a community to sustain it - in one generation an innovative scientist may announce his discovery and be condemned for doing so, and many years later his discovery may be confirmed to have been correct. Later on we shall see that this has indeed happened several times in the history of modern empirical science.

Indoctrination of children at an early age contributes greatly towards the perpetuation of religious traditions. Thus it is in the socialization of children that the transmission of most religious doctrines takes place. Though it is true that conversion from one religion to another may occur among some individuals in old age, it is worthwhile to emphasise the fact that some religious traditions are not missionary. The African religious heritage, for example, is so integrated in the total African way of life that it cannot be exported without distorting it. When Africans migrate, they do so with their culture and their religious values. This happened, for instance, when African slaves were forcefully transported from their home in Africa, across the Atlantic ocean to America and the Caribbean islands.[11] Today the same is happening when Africans migrate from their rural areas to modern urban centres.[12]

In view of what has been said so far, it can be concluded that religious doctrines and scientific theories approach the same reality differently. While science endeavours to acquire ever more accurate description of particular aspects of physical reality, religion affirms a comprehensive evaluation of the whole of reality and the place of the human race in this totality. Science consolidates its empirical knowledge in hypotheses, theories and laws which are assumed to be tentative pending any new empirical evidence to contradict their assertions, but religious doctrines are claimed to be absolutely true irrespective of any new empirical knowledge. However, religious doctrines are expressed within certain empirical assumptions about the universe.[13] When those assumptions change as a result of more empirical knowledge, the doctrines do not lose their validity and appeal for those to whom they are relevant. In the case of scientific theories, when the empirical assumptions on which they are based are abandoned, the theories automatically become obsolete.

In the doctrine of creation as expressed in the first eleven chapters of the book of Genesis, a world-view is assumed which considers the universe to consist of the earth, the sun, the moon and the stars. The planetary centre of this universe is the earth, and in the earth the centre of interest is man. God is the creator of this universe and he is the one who has given man the power to subdue all things in the world. Since the discovery of Copernicus and its refinement by such scientists as Galileo,

Kepler, Newton and others, this ancient Hebrew world-view can no longer be assumed. However, Christians continue to consider the doctrine of creation as absolutely true, even when they do not assume that world-view in which the doctrine was originally stated. Most Africans today continue to assume a pre-Copernican world-view, since modern geography is taught in schools and the majority of Africans have not acquired literary education.[14] Yet many Africans, both literate and illiterate, have accepted Christianity. Perhaps this situation is part of the reason why in Africa today the theory of evolution is considered by many people to be in conflict with the Christian doctrine of creation.

It remains now to examine briefly the theory of evolution in the context of the development of modern science, and then to comment on the controversy that arose when Charles Darwin published the theory in A.D. 1859. After that we shall draw conclusions that may be of relevant application today.

2. Unwelcome Reception of Innovative Ideas

During the last five centuries great advances have been achieved in the acquisition and utilization of scientific knowledge. Considering these great leaps it is tempting to overlook the fact that scientific discoveries have not always been positively received. Darwin's theory of evolution had a mixed reception, but it took a rather short time to become widely accepted in Europe. By the beginning of the twentieth century, after just four decades of the publication of Darwin's Origin of Species (1859), evolutionism was taken for granted by many influential scientists, philosophers and theologians.[15] Scientists in earlier periods had much greater difficulty in popularizing their discoveries. One significant reason for this situation was that until the Renaissance and the Reformation in the sixteenth century, the Catholic Church has claimed monopoly to all knowledge, to the extent that empirical discovery and philosophical reflection were considered subordinate to the established Christian doctrines as maintained by the Catholic Church. The Renaissance and the Reformation helped to relax the control of the Church over scientific and philosophical enquiry. Some of the predecessors of Charles Darwin were publicly condemned for announcing their scientific discoveries which are now widely taken for granted. Here we shall mention a few of these innovators to whom modern empirical science owes a great deal.

At the beginning of the sixteenth century, Copernicus discovered and taught that the earth revolves around the sun. This was a revolutionary discovery, because prior to the announcement of Copernicus, it was thought and believed that the sun revolved around the earth. The geo-centric conception of the universe was considered to be beyond any dispute by theologians, philosophers and scientists of the time. Copernicus, Kepler, Galileo and Isaac Newton popularized the new conception of the universe. The latter gave it the stamp of respectable scientific authority.[16]

Galileo was imprisoned for teaching this new discovery. He was tried in court for teaching what scientists had proved to be true. To save his life he had to promise not to publicly maintain what we now take for granted after we have gone through a few years of literary education. He would have been executed had he refused to recant. However, Galileo

recanted, but he continued to do his research privately. His scientific discoveries contributed greatly to the development of modern physics and astronomy. Martin Luther proclaimed that Copernicus was "a fool".

He wrote:

> People give ear to an upstart astrologer who strove to show that the earth revolves, not the heavens or the firmament, the sun and the moon. Whoever wishes to appear clever must devise some new system, which of all systems is of course the very best. This fool (Copernicus) wishes to reverse the entire science of astonomy: but sacred scriptures tell us that Joshua commanded the sun to stand still, and not the earth (Joshua 10: 12-14).[17]

John Calvin, quoting Psalm 93:1, maintained that the world is so established that it cannot be moved. He therefore considered the authority of the Holy Spirit to be above that of Copernicus, and warned his fellow Christians not to accept the new world-view. He asked:

> Who will venture to place the authority of Copernicus above that of the Holy Spirit?[18]

At that time, both Catholic and Protestant theologians were determined to uphold the world-view which was assumed in the Bible. But their campaigns against the new astronomical discoveries did not prevent the new world-view from becoming established. Some influential philosophers of that time also refused to accept the new world-view. In the midst of the controversy, Galileo wrote a letter to Kepler in which he expressed the wish that the two scientists could laugh together at the stupidity of 'the mob' consisting of professors of philosophy, who tried to refute the existence of the satellites which Galileo had observed around planet Jupiter using a telescope he had constructed. He castigated those philosophers for using 'logic-chopping arguments as though they were magical incantations'.[19]

Another scientist, William Harvey, discovered the circulation of the blood in 1616. When he published his discovery in 1628, his contemporary experts mistakenly judged it to be a wild guess.[20] He had found that blood was pumped around the body by the heart. Before that discovery, it had been thought and believed that blood flowed through the human body as the calm water of a stream flowing gently along a gentle course, without any rapids. His contemporary experts in Europe sarcastically told him that perhaps in England blood flows through the human body via a pump, but in mainland Europe no one ever had heard of the heart beating like a pump.[21] Today Harvey's discovery is taken for granted as indisputable scientific knowledge.

Many of the scientific discoveries of Isaac Newton were an intellectual surprise to his contemporaries. Newton (1642-1727) founded his research on discoveries which had been made by his scientific predecessors, like Copernicus, Galileo and Kepler. By the middle of the seventeenth century empirical science had acquired its modern character. Newton gave it the respectability it needed to directly influence technological development in Europe. After Newton, the pre-Copernican world-view was widely considered to be scientifically obsolete. This development had shocking implications for Christian theology. Deism arose as a theological

compromise to accommodate the new scientific outlook. Of this profound change that had occured, Bertrand Russell has written:

> In the medieval world, the earth was the centre of the heavens, and everything had a purpose concerned with man. In the Newtonian world, the earth was a minor plant of a not especially distinguished star (the sun); astronomical distances were so vast that the earth, in comparison, was a mere pin-point. It seemed unlikely that this immense apparatus was all designed for the good of certain small creatures on this pin-point. Moreover, purpose, which had since Aristotle formed an intimate part of the conception of science, was now thrust out of scientific procedure. Anyone might still believe that the heavens exist to declare the glory of God, but no one could let this belief intervene in an astronomical calculation. The world might have a purpose, but purposes could no longer enter into scientific explanations.[22]

According to Newtonian science, the universe functioned according to laws which were immutable. Thus within the specifications of these laws the functioning of the universe was considered accurately predictable. Given this determinism, Christian theism was deemed irrelevant: If God had created the universe, he must have done so and then left it to function automatically according to the laws of nature. Scientists like Newton and others could find no empirical evidence to confirm either that God created the universe, or that he sustains it. In an age dominated by empirical science, the doctrinal claims of Christianity seemed to be far-fetched speculation and superstition. During the eighteenth century some renowned philosophers like Hegel and Kant endeavoured to fill, with metaphysical philosophy, the vacuum left by the scientific discreditation of Christian doctrines.

Hegel propounded his philosophy of mind, and Kant proposed an ethical approach to ultimate questions. However, neither Hegel's Idealism nor Kantian Ethics managed to abolish Christian theism. Philosophers and scientists continued to attack Christianity, but some Christian thinkers continued to defend it. In the nineteenth century there emerged several strands of thought, some in favour of Hegel's metaphysics and others opposed to it; some in favour of the empirical approach and others dissatisfied with its claims to objectivity. It is in the context of this multi-sided intellectual climate that there developed the divergent philosophies of such thinkers as Kierkegaard, Feuerbach, Comte, Marx, and Nietzsche.[23] Charles Darwin's research added to this diversity, and contributed greatly towards the entrenchment of empirical science in all branches of human enquiry in Europe. After Darwin's publication of his Origin of Species, evolutionism was extended beyond biology to the development of society and religion.[24] Rather than digress into a detailed study of all those divergent strands of nineteenth century European thought, we shall now direct our attention to Darwin's theory of evolution and the religious controversy which it sparked off.

3. Charles Darwin and the Theory of Evolution

Evolutionist thinking had been published by some thinkers in Europe

before Darwin's work came to public notice, but it was Darwin who applied this thinking most consistently to biology. In 1830-33, Charles Lyell had published a book in three volumes entitled The Principles of Geology, expressing the view that the present condition on the earth's surface was the result of a gradual process of change, which could be traced to millions of years.[25] The white chalk cliffs of Dover, Lyell had argued, were made up of the remains of minute marine creatures which had been deposited at the rate of one inch or two per century. The long history of the earth's surface could be studied through an analysis of fossils that dated back to antiquity. In 1844, Robert Chambers had anonymously published another book under the title The Vestiges of the Natural History of Creation.[26] The book had extended evolutionary development from geology to biology, arguing that creation could not be rightly considered to have been accomplished in a short moment, as the book of Genesis claimed. Erasmus Darwin, who was the grandfather of Charles Darwin, had also been an evolutionist.[27]

Between 1831 and 1836, Charles Darwin had accompanied a surveying expedition in the ocean off the South American coast, and he collected his data for his theory in the island in that area. The data included information on both flora and fauna. However, Darwin did not publish his research until many years later. In 1858, he and A.R. Wallace jointly published a book entitled On the Tendencies of Species to form Varieties.[28] Wallace had reached conclusions which supported Darwin's theory of biological evolution, and when Wallace sent his manuscript to Darwin, the latter decided to publish his research. In 1859, Origin of Species was published, and the whole of the first edition was sold out on the day it was published. Thomas Huxley, a friend of Darwin, wrote a favourable review of the book in the Times newspaper, but other reviewers thought that the book did not contain anything new - that his ideas had already been expressed in earlier publications, such as the book of Chambers which had appeared in 1844.[29]

Darwin's theory consisted of two parts. The first part was not new, for it affirmed the view that the universe as it is today is the result of a slow process of change, lasting billions of years. The second part, however, expressed a new idea. Darwin argued that the living organisms existing today within this universe, derive their internal and external structure from a very long process of adaptation to the changing conditions in their environment.[30] As the struggle for survival continued under the changing conditions in the universe, new species emerged, more complex and better adapted to the new environment. Old species which could not adapt to the new conditions became extinct. Thus the existence of living organisms in the universe is a struggle in which only the fittest will survive. Survival under difficult environmental conditions demanded the adaptation of both the internal and the external structure of the various species, in order to cope with those conditions. Thus each generation of a particular species would be better equipped to cope with the environment than its progenitors.

The human race - homo sapiens - is the species which has best adapted to the natural environment. In the process of evolutionary development it has acquired a capacity to change its environment in order to meet its basic needs for survival and satisfy its interests. The human race thus became master of the universe through the process of natural selection, rather than through a moment of creation out of nothing. Moreover, the

human race according to Darwin's theory was descendant of simpler animal forms. Thus the apes are distant relatives of human beings along the evolutionary line.

One year after the publication of Origin of Species, the then Anglican bishop of Oxford, Samuel Wilberforce, attacked Charles Darwin's work at a conference of scholars in that city. Some critics of the controversy suggest that Wilberforce was used by Prof. Richard Owen, who had dismissed Darwin's theory as "nothing more than guess work and speculation." A. O. James suggests that:

> Wilberforce should not have played Owen's role, lacking both technical biological knowledge and the philosophical insight required to pass judgement on the hypothesis.[31]

There was not and still there is no consensus among church leaders with regard to the theory of evolution. Some, like the Anglican Archbishop Fredrick Temple (1821 - 1902), believed that the theory of evolution was not incompatible with the Christian doctrine of creation. He wrote that "the doctrine of Evolution (sic) leaves the argument for an intelligent Creator and Governor of the earth stronger than it was before.[32] Other church leaders, like the Baptist Rev. Charles Haddon Spurgeon (1834-1892) were openly skeptical of the theory.[33] Today there is a wide spectrum of opinion among church leaders with regard to the theory, a spectrum ranging from wholesale acceptance to outright rejection.

Darwin and his friend Thomas Huxley adopted an agnostic position with regard to the Christian doctrine affirming the existence of a creator-God. Many scientists and philosophers today share this agnosticism. It should be noted, however, that agnosticism is basically an empiricist position, because it is founded on the assertion that since God is beyond the scope of empirical science, it is impossible that although Darwin had declared his agnostic stance in matters concerning the existence of God, he was buried in Westminster Abbey, thus indicating that there were influential church leaders (including Fredrick Temple) who greatly valued the significant contribution which Darwin had rendered to modern science and even to Christianity.[34] It must have been disturbing for some devoted Christians to hear that the human race is descended from apes. On the other hand, it was also relieving for others to appreciate that it is naive to accept the account of creation in Genesis as literally true in view of all discoveries that have been made by modern science with regard to the long history of the universe and of the human race.

The debate is not yet closed, for there are Christians today who still consider the theory of evolution to be incompatible with the Biblical doctrine of creation. However, those who sense a collision between the two views, be they philosophers, theologians or scientists, misunderstand the distinction between religious doctrines and scientific theories as discussed at the beginning of this presentation. There ought to be no conflict, if it is accepted that science is mainly concerned with an approach to reality which is radically different from that of religion.[35] We shall now proceed to comment briefly on the religious approach to reality, with particular reference to the Christian doctrine of creation.

The Christian Bible was written cummulatively over many centuries and in at least three distinct languages. Although today, it is often printed as one literary volume, it is actually a library of books on a particular theological interpretation of history.[36] The book of Genesis fits into this library as a statement of the basic theological assumptions on which this particular interpretation is founded. The doctrine of creation affirms a set of basic truths which are outside the scope of empirical science, and on which empirical science cannot pronounce any judgement.

4. The Christian Doctrine in Creation

The first eleven chapters of the book of Genesis are not a scientific account. Their main concern is not to describe how the universe originated. Rather, they are a theological statement of why the universe in general and the human race in particular are imperfect and finite. The doctrine of creation as recorded in Genesis affirms two basic truths about the universe and the human race. According to the first of these truths, the universe did not initially bring itself into being. Rather, the doctrine of creation attributes the origin of the universe to God. This is a truth which empirical science cannot verify or falsify, because God is not included in the agenda of scientific investigation. God is not a physical entity and is therefore not amenable to the objective procedures of empirical enquiry. The doctrine of creation does not adopt an agnostic position as Charles Darwin, T. H. Huxley and others have done. It affirms that God brought the universe into being, and that he continues to sustain it. This affirmation would remain fundamentally true, whether the universe acquired its present form in a fraction of a second, in six days or even in a thousand billion years. It is a mistake to treat the first three chapters of Genesis as if they were an exhaustive empirical description of how the universe acquired the present form, because that is not the main concern of this section of the Christian Bible.

If these three chapters of Genesis are considered to be alternative theories accounting scientifically for the origin of the universe, they will lose their religious value and become an incoherent, inconsistent and untenable hypothesis. As a scientific theory or philosphical speculation the doctrine of creation is empirically and logically vulnerable. The following are a few examples to illustrate this point:

According to the first chapter of Genesis, God first created light and darkness. The light was called "day" and the darkness was called "night".[37] However, we know now that light does not always shine during the day, and that night is not always dark. Artificial light can be made to shine during both day and night. The discovery and utilization of electricity by modern science makes this observation indubitably clear. Yet the first chapter of Genesis does not seem to take this fact into account. Moreover, it does not seem to associate day and night with the sun and its stellar relation with the earth. The doctrine of creation seems to be unaware of the empirical fact that day and night fall on different parts of the earth's surface at different times.

Another interesting example regards the creation of man and woman. In the first chapter, man was the last creature to be created. It is not stated how this creation was conducted. But it is emphasized that man was created in the likeness of his creator, God.[38] Can we know the nature of God by empirically discerning the nature of man?

If a man is a miniature model of God, then it seems logical to infer that God bears an empirical resemblance to man. Such an inference, though logical, would attribute to God all the imperfections of man, and Christian theology denies that God is imperfect in any way. What does it mean then, for Christian theology to maintain that man was created in the likeness of God? The doctrine of creation also emphasises that man was created as male and female. If man was created in the likeness of God, is it to be inferred that God exists in two parts, as male and female? According to the creation narrative, God blessed the first human couple, commanding them to be fruitful and to multiply. Is the attribute of regeneration applicable to God, as it is to the human race? These are empirical questions which would have to be consistently answered if the creation narrative is regarded as a scientific statement. They are inescapable if empirical coherence and consistency are to be maintained. But the creation narrative in Genesis does not give consistent empirical answers to these questions.

In the second chapter of Genesis a separate account of creation is presented. Apparently, the universe assumed in that narrative had only one river which flowed out of the garden of Eden and then divided into four separate rivers. Two of them are named as the Tigris and the Euphrates.[39] Are those the rivers which today flow into the Persian Gulf? What about the other rivers on the surface of the earth? We can see in these examples that if the doctrine of creation is subjected to scientific scrutiny on the assumption that it is a scientific hypothesis, numerous inconsistencies will be found. Moreover, as a scientific theory the account of creation in Genesis is empirically untenable, because it includes God and is not within the scope of scientific explanation and investigation.

The second truth affirmed in the doctrine of creation is that man is imperfect. Theologically, man's imperfection is explained in terms of Sin - in terms of man's estrangement from God. The narrative of Adam and Eve in the garden of Eden is an idiomatic expression of why man is mortal and imperfect. It explains theologically why man has to labour in order to survive, and why ultimate happiness is difficult for the human race to realise. If this narrative is treated as an accurate historical description of how the human race changed from an immortal to a mortal nature, many insurmountable difficulties will be encountered in an endeavour to find empirical consistency.

In the second chapter of Genesis the creation of man is presented in more detail. Man was made out of dust, and then God "breathed into his nostrils the breath of life; and man became a living being."[40] In view of the preceding account of the creation of man, how is the likeness of man to God to be interpreted? Is it the physical structure of man, or is it his invisible life which is in the likeness of God? Woman was created in a surgical operation while man was asleep. Apparently, if this account is viewed scientifically, the creation of Eve was the first surgical operation ever to be conducted. What were the laboratory conditions in which this unique operation was successfully conducted? Surgery is a relatively recent development of modern science. Within the available scientific knowledge today, it is difficult to imagine how a man can be sliced in such a way that two separate living individuals are produced. Caesarean operations are common today, but they are conducted on expectant mothers and not on men. But according to the narrative, Eve was

carved out of the ribs of Adam in a strange surgical operation which is difficult to interpret or repeat empirically. These observations indicate some of the great conceptual difficulties that arise when the doctrine of creation is treated as a scientific hypothesis.

According to the third chapter of Genesis, "the serpent was more subtle than other wild creatures that the Lord God had made."[41] It was a talking creature which was clever enough to deceive human beings. It deceived Eve to disobey God and eat a fruit picked from the forbidden tree. God cursed the talking serpent from that day, condemning it to become forever a creeping reptile. Apparently, it was in that curse that serpents were forever denied the capability to talk with human beings. Earlier in the creation narrative it had been stated that God had finally created all animals and plants. Apparently, a re-creation was conducted in the case of the serpent. Serpents do not talk today, except in tales and myths. Was there ever a time when serpents actually talked with human beings? This is a question which Charles Darwin, as a scientist, would have found interesting to investigate. His theory of evolution would propose a negative answer to the question.

The first eleven chapters of Genesis do not answer these and similar empirical questions, which would be of great interest if the doctrine of creation were to be treated as a scientific description of how the living organisms in this universe acquired their present forms. However, those questions are not the central concern of this section of the Christian Bible. A particular world-view is assumed in the book of Genesis, and within that world-view the book presents in various narratives the two basic truths mentioned above, regarding the universe in general and the human race in particular:

(a) that the universe as a whole owes its origin and sustenance to a power much greater than itself - God; and

(b) that in relation to this supernatural power (being), man is powerless, imperfect and finite.

Sin in man is contrasted with God's perfection. In order for man to be at peace with himself, with other persons, with nature and with God, man must obey God who is the ultimate source of all power, wisdom and goodness.[42] Thus religion becomes a guardian of morality, which is not a concern of empirical science.[43]

We may conclude this discussion, therefore, by emphasising that the doctrine of creation approaches reality metaphysically, answering ultimate questions which are not the primary concern of empirical science. The theory of evolution, on the other hand, offers an empirically derived explanation, of how the universe may have developed into its present form. The two approaches do not collide with each other, unless we treat the theory of evolution as a religious doctrine and the doctrine of creation as a scientific theory. To make such a mistake would destroy the contributions of science and religion towards the human quest for a comprehensive understanding of this universe in which we live, and of which we are a minute but significant part.

In view of the foregoing comments, we may therefore agree with Archbishop Fredrick Temple, that the theory of evolution leaves the argument for an

intelligent Creator and Governor of the earth stronger than it was before. The theory of evolution, as a scientific explanation, can neither prove nor disprove the existence of God. Nor can it refute the doctrine of creation, unless that doctrine is treated as a scientific hypothesis, which would be a mistake. If the doctrine of creation were treated as a scientific theory alternative to the theory of evolution, logical and empirical considerations would demand that it be rejected outrightly as incoherent, inconsistent and unscientific. If someone chooses to believe or reject the fundamental truths affirmed in the Christian doctrine of creation, his choice cannot be conclusively supported by any branch of empirical science or philosophy. Belief in God or rejection of such belief is ultimately a matter of faith, and it belongs to the assessive, rather than the empirical, mode of thought and expression.

Reference Notes

1. In another paper I have argued that there are basically three modes of thought and expression: (a) the empirical mode which includes modern empirical science; (b) the assessive mode which includes religion, morality and the appreciation of beauty; (c) the stipulative mode which includes philosophy. According to this argument, the theory of evolution fits into the empirical mode, and the doctrine of creation fits into the assessive mode.

2. Materialism as a philosphy asserts the existence of physical reality, but it denies the existence of any other forms of reality. I do not accept this view. It seems to me that reality has both physical and non-physical aspects.

3. Cf. in the physics of light, the wave theory, the theory that light travels in straight lines, and the photon theory: these apparently irreconcilable theories have corresponding models which describe various characteristics of light.

4. It is not the concern of this paper to catalogue all the numerous scientific theories which have been formulated. The interested reader may refer to standard works on the history of modern empirical science.

5. For example, pupils in a primary or secondary school can under relevant instruction, and with appropriate equipment, repeat experiments which were first conducted by renowned scientists from various countries many years ago, and such pupils can expect the same results if the experiments are carried out according to the exact specifications.

6. Paul Tillich, for example, defines religion as follows: "The fundamental concept of religion is the state of being grasped by an ultimate concern, by an infinite interest, by something one takes unconditionally serious." See his Morality and Beyond, London Collins Fontana Library, 1969, p. 23. This definition recurs in many of Tillich's works such as The Courage to Be and his Systematic Theology.

7. This point is elaborated in most works on the comparative study of religion. See for example, N. Smart, The Religious Experience of Mankind, London, Collins Fontana Library, 1969; E. O. James, Christianity and Other Faiths, London, Hodder and Stoughton, 1968.

8. For a discussion of Buddhism see N. Smart, op. cit., pp 109 - 122.

9. On this point see Kosuke Koyama, Waterbuffalo Theology, London,SCM Press, 1974 and No Handle at the Cross, London, SCM Press, 1976. Koyama is a Japanese Christian theologian who worked as a missionary in Thailand. In these works, he discussed the problems faced by Christian missionary enterprises in a Buddhist setting such as Thailand.

10. I have discussed this point in my article, "The African Experience of God in Thought and Practice, Vol. 1, No. 1, 1974, Nairobi, East African Literature Bureau. See also J. Mugambi and N. Kirima, The African Religious Heritage , Nairobi, Oxford University Press, 1976.

11. For a discussion of religion among Africans in the Trans-Atlantic diaspora see G.S. Wilmore, Black Religion and Black Radicalism, New York, Anchor Press /Doubleday, 1973.

12. See J. N. K. Mugambi, "Some Perspectives of Christianity in East Africa in the Context of the Modern Missionary Enterprise with Special Reference to Kenya", M. A. Thesis, University of Nairobi, 1977, pp. 159 - 166.

13. Thus the doctrine of creation in the Bible did not invent a cosmology, but was articulated in the context of a presupposed cosmology. The change of cosmology arising from the Copernican revolution produced a great shock on those Christians who believed that Biblical cosmology was eternally correct.

14. J. N. K. Mugambi, M. A. Thesis, op. cit., pp. 96 - 100.

15. Colin Brown, Philosophy and the Christian Faith, London, Tyndale Press 1968, Third American printing by University Fellowship, 1978, p. 147.

16. B. Russell, History of Western Philosophy, London, Allen and Unwin, 1946, 2nd edition 1961, pp. 520 - 21.

17. op. cit., p. 515.

18. Ibid., p. 515.

19. Ibid., p. 520.

20. Ibid., p. 521.

21. J. G. Donders, Don't Fence Us In: The Liberating Power of Philosophy, 11th Inaugural Lecture, University of Nairobi, 1975.

22. B. Russell, op. cit., p. 523.

23. The interested reader may refer to the various works of renowned 19th century thinkers. For an introduction see B. Russell, op. cit.,and C. Brown, op. cit.

24. It was extended to anthropology by such scholars as Herbert Spencer

and Edward Tylor, to politics by Karl Marx, to metaphysics by Alfred N. Whitehead, Teilhard de Chardin and others, see Colin Brown, op. cit., pp. 149 - 50, 236 - 42. Also, E. O. James, op. cit., pp. 17 - 23.

25. C. Brown, op. cit., p. 147.

26. Ibid.

27. Ibid., B. Russell, op. cit., p. 696.

28. C. Brown, op. cit., p. 147.

29. Ibid., p. 148.

30. Ibid., p. 148 - 49; B. Russell, op. cit., p. 696.

31. E. O. James, op. cit., p. 19.

32. Quoted in C. Brown, op. cit., p. 150.

33. Ibid.

34. Ibid.

35. The view that there is a collision between religious doctrines and scientific theories arises from the failure to recognize that religion and science approach reality from two distinct perspectives. This point has been elaborated in the first part of this paper.

36. On this point see The Oxford Annotated Bible (RSV), New York, Oxford University Press, 1962, pp. xxi-xxiv; 1513 - 16. Also Reginald Fuller, The Book of the Acts of God, London, Duckworth, 1960, Penguin Edition 1963, pp. 39 - 51.

37. Genesis, 1: 1 - 5.

38. Ibid., 1: 26 - 28.

39. Ibid., 2: 10 - 14.

40. Ibid., 2: 4 - 7.

41. Ibid., 3: 1

42. For a Christian believer, these remarks are a confession of faith, rather than a statement of empirical fact.

43. This paper has not focussed its attention on the relationship between religion and morality. A separate study would be needed for the elaboration of this interesting theme. On the question of this relationship, the interested reader may refer to Paul Tillich, Morality and Beyond, op. cit., in which Tillich argues that "there is a religious dimension in the moral imperative itself. Derived from the fundamental concept of religion is the traditional concept

that religion is a particular expression in symbols of thought and action, of such ultimate concern within a social group, as, for example, a church. If the moral imperative was derived from religion in the traditional sense of the word, secular ethics would have to sever any ties with religion, for it rejects direct dependence on any particular religion. If however, the religious element is intrinsic to the moral imperative, no conflict is necessary (pp. 23 - 24).

CHAPTER SIX

MIRACLES AND SCIENTIFIC EVIDENCE

1. Introduction

The apparent conflict between religion and empirical science arises because many people tend to review science from perspectives which do not take into consideration that religion and science are two different approaches to the human understanding of reality. Some religious people judge the achievements of modern science from an exclusively religious point of view, whereas some scientists - not all scientists - judge the claims of religion from an exclusively empirical point of view. Likewise a great conflict becomes apparent when religion is viewed from a philosophical perspective and philosophy is judged from a religious perspective. I have mentioned three broad branches of human understanding - religion, science and philosophy. These three branches correspond to three basic modes of human thought.

It is characteristic of all normal human beings, that they want to develop a comprehensive understanding of themselves and of their environment. Whenever and wherever a human being attempts to gain a comprehensive understanding, he has three main modes of thought at his disposal. The three are what I have called, for want of better terms, the empirical, aesthetic and stipulative modes, respectively. In terms of these categories, modern science corresponds to the empirical mode; religion corresponds to the aesthetic mode; and philosophy corresponds to the stipulative mode of human thought.

In the empirical mode of thought a person expresses his understanding of reality using empirical descriptions. He articulates what his senses have experienced, using words or other familiar signs in a language. Thus the empirical mode of thought involves empirical concepts, such as height, length, breadth, depth, colour, taste, smell, sound, shape, texture, thinness and thickness, temperature and pressure. Using these concepts, the empirical mode of thought describes the physical part of reality - that part which can be perceived in matter, time and space. This mode of thought will not include value judgements in its descriptions, because value judgements are not empirically verifiable. However, it is common place experience that in ordinary conversation it is difficult to conduct a discussion on any subject without including value judgements. The empirical mode of thought, on its own, does not have the capacity to deal with the non-material aspects of reality. But this does not mean that reality consists in matter only, as logical positivists and other materialists have claimed.

In the aesthetic mode of thought, a person assigns his own value judgements to the reality around him, and also to himself. In addition to describing an object empirically, he may judge that the object is beautiful, ugly, awful, tremendous, wonderful, repulsive and so on, while two or more individual persons may be fully agreed as to the empirical particulars of a physical object, it is only rarely that two persons will have identical value judgements on that object. Thus two architects, by making mathematical calculations on the empirical specifications of a particular building may fully concur with regard to the stability and the

durability of that building, but they will not necessarily agree as to whether the building is beautiful or not. There is more to beauty than empirical specifications. Women's beauty contests confirm that this is the case.

When the empirical and the aesthetic modes of thought are applied to reality in general, it becomes clear that there will hardly be any disagreement about the empirical specifications of physical objects. Should such disagreement arise, they can be settled by appealing to sense data. Modern science and technology have helped man to design precision equipment for the purpose of settling such disagreements. However, when the issue of placing values or reality is considered, it is clear that there is a great divergence of opinion, both within a given culture, and also from one cultural heritage to another. What all regions have in common, is that they are based on the same mode of thought. But the religious values attached to reality vary from religion to religion.

In the stipulative mode of thought, human beings establish principles by which interpretations of reality will be accepted as valid and meaningful, or rejected as invalid and meaningless. Philosophers are innovators in this stipulative process, but the legitimation and popularization of a particular principle, is a cultural development. For this reason, philosophical ideas are not clearly understood when they are developed. It is worthwhile to add that the stipulative role of philosophy is not limited to analysing the meaning of linguistic expressions, as some logical positivists and philosophers of language in this century have claimed. The critical function of all branches of philosophy helps to clarify the limits of human thought, and this is a stipulative contribution. For any discussion to be mutually understood, the philosophical (or stipulative) assumptions underlying that discussion must also be mutually taken for granted.

Let these remarks suffice, as a prelude to our discussion of miracles and scientific evidence. However, one additional comment must be made at this point. A great deal of confusion of ideas arises when, in expression, these three modes of thought are inappropriately mixed up. Considering that in ordinary conversation all the three modes are in operation, it is clear that a person's competence in a language is directly proportional to his ability to recognize the various contexts in which words are used.

This last comment needs an illustrative example, for it is closely related to the problem we are discussing in the rest of this session. If an Englishman says: "Yesterday it was raining cats and dogs", an African need not respond by calling the Englishman a liar. The Englishman knows that the message conveyed by this expression cannot be derived directly from the literal meaning of the words making up the sentence. The expression is not within the empirical mode of thought, but in the aesthetic. It would therefore be erroneous to interpret it literally. Later, we shall return to the question whether miracles are empirical accounts of actual events.

2. Towards an Understanding of Miracles

What is a miracle? The word is commonly used in two senses. Firstly, it can be used to mean "that which causes wonder and astonishment, being extraordinary in itself and inexplicable by normal standards of judgement

and experience." According to the Encyclopaedia Britannica it is the Latin root of the word miraculum, from which the word miracle in English is derived. Secondly, the word is also used to mean a sign, indicating something other than itself. This latter sense of the word is the one which is dominant in the Bible, and in other religious literature.

When modern empirical science finds the belief in miracles absurd from the empirical point of view, the meaning of miracles which is presupposed is that of events which are contrary to empirical experience and established explanations of natural phenomena. However, when a theologian explains the importance of miracles for his religion, he presupposes the latter meaning of a miracle as a sign indicating something beyond itself. These two senses in which the word miracle is used are closely related (for in both senses the awareness of wonder is present), but the two meanings are distinct from one another. Thus it is clear that a serious conceptual confusion arises if, in a discourse between scientists and theologians, scientists presuppose one of the two meanings while theologians presuppose the other. It seems to me to be true that the apparent conflict between religion and empirical science, with regard to the belief in miracles, arises because of a lack of mutual conceptual concurrence.

Extraordinary and astonishing happenings acquire religious importance especially when they express, reveal or signify a religious interpretation and understanding of reality, however that reality is defined. Theologically, miracles serve as credentials to endorse authority for the claimants to religious leadership or prophecy. Take Moses for instance. According to the Old Testament in the Christian Bible (Exodus 4: 1-9), Moses hesitated to assume leadership because he feared that the people would not accept his authority. "They will not believe me or listen to my voice, for they will say: "The Lord did not appear to you". Then miraculously the rod which Moses carried was turned into a serpent and Moses ran away from it. But it was turned into his rod once again. This rod became the symbol of authority for Moses. With it he struck the Red Sea and the water parted to make a road along which his followers crossed to safety. In the desert, Moses struck a dry rock with his rod, and there was water for his followers to drink. Miracles also serve as demonstrations of the superior powers of a particular God. For instance, when Moses expressed his fear that Pharaoh would not listen to him (Exodus 7: 1-14), God reportedly said to him: "See, I make you as God Pharaoh; and Aaron your brother shall be your prophet."Moses would prove the superiority of God by performing miracles before Pharaoh. Another example in this connection is Elijah, the prophet who called fire from heaven to demonstrate the power of his God over that of the Gods of Ekron (2 Kings 1: 3-16). Another function of miracles, from the theological perspective, is to serve as evidence of the truth of a particular religion. The accounts of the Virgin birth and the resurrection of Jesus are indicative of this function. In Islam, the belief that the Qur'an was dictated word for word by Allah to Muhammad his Prophet, is another illustrative example in this context.

The belief in miracles is found among all peoples of the world. It is interesting that when Christianity was introduced in Africa, missionaries from Europe and North America dismissed African religious beliefs as all superstition and nothing more. This was a prejudiced view, because in the place of traditional African beliefs the missionaries preached about all

the miracles about which we read in the Christian Bible, and they expected African converts to believe those miracles without question. From the point of view of those Africans who did not accept Christianity, the Christian faith was not less superstitious than the African religious heritage. According to traditional African belief, what Christian missionaries called superstition in Africa was accepted as truth originating from authenticated religious authorities.

It is worthwhile to add that in general, religious prejudice prevents the adherents of one religious heritage from acknowledging the truth and authority of other religous traditions. Thus the events which are accepted as miracles by the adherents of one religion are dismissed as superstition by the followers of other faiths. During the modern Christian missionary enterprise in the nineteenth and twentieth centuries, missionaries from the western hemisphere have been more outspoken than ever before, in condemning the religious beliefs of other peoples of the world. This prejudiced condemnation was reinforced by the self-styled belief that the peoples who have developed western culture are intrisically superior to all the other peoples who comprise the greater proportion of the human race. It goes without saying that this presupposed superiority is a great superstition, which is not verifiable on empirical grounds.

3. Superstitions and Empirical Science

At this point it is worthwhile to comment that when adequate empirical knowledge is lacking, inexplicable happenings are accorded the status of miracles, and this view is incorporated into the dominant religious interpretation of reality. However, this view becomes corrected, though with great resistance and controversy, when more and correct empirical understanding is acquired. Such a correction occurred in the western intellectual tradition during the Copernican revolution. It is now common knowledge in the west, that it is the earth which revolves round the sun, rather than vice versa. But this understanding came only after Copernicus and other thinkers made their empirical discoveries and published them. Another important correction occurred in the nineteenth century, when the theory of evolution became widely accepted.

Superstition is here being distinguished from miracles, because a superstition is rooted in the fear of what is unknown - even when the unknown happens to be in the physical dimensions of reality. Superstition is not an authentic approach to reality, because its impact on society vanishes when the unknown becomes known through an expansion of empirical knowledge. The development of modern empirical science is increasingly helping mankind to disentangle superstition from genuine religious belief.

In view of this comment about superstitions and miracles, it would be erroneous to conclude that all beliefs in miracles are rooted in superstition. This would be the case only if the empirical approach to reality were presupposed. If, on the other hand, miracles are understood as belonging to the religious mode of thought, empirical science has no authority from its own method and scope of investigation, to relegate all miracles to superstition. This remark implies, therefore, that it is possible for an empirical scientist to believe in miracles without self-contradiction provided that he understands miracles religiously, rather than empirically.

In my previous lecture it was shown that a modern scientist can maintain a religious view of reality without necessarily contradicting the empirical evidence derived from his scientific research. If this is true, as I think it is, then it follows also that it is possible for a scientist to believe in miracles without negating his scientific findings. Indeed there are many eminent scientists today who have deeply entrenched religious beliefs about reality. It is fair to comment that for some peoples, modern empirical science strengthens religious belief, when they realise that reality is much more mysterious and complicated than all branches of sciences can comprehend. For other people, however, science is viewed as a replacement of religion. I think that this latter view is rather pretentious, because reality includes much more than matter, time and space.

4. Miracles and Scientific Evidence

The discussion so far has concentrated on providing a theoretical framework for understanding miracles and scientific evidence. What remains now is to comment briefly on how miracles can be understood while at the same time affirming the findings of empirical science. Although specific miracles can be cited for applied illustration, this is deemed unnecessary in this presentation. It is more important to establish a principle by which all miracles can be evaluated in the light of scientific evidence, and this is what will be done in the rest of this presentation.

It needs stressing that every miracle has two basic aspects. Firstly, it has an empirical content, and secondly, it has a religious (or aesthetic) interpretation. The empirical content of miracles can be subjected to the empirical data of scientific evidence. However, the aesthetic of religious interpretation of a miracle is indifferent to the empirical data relating to the miracle. One example may serve to illustrate this claim. In school we were taught that Mount Kenya was 17,040 feet above sea level. Later scientific investigation and measurement showed this calculation was wrong, and we were taught that the height of this mountain was 17,048 feet above sea level. For empirical science this was an important discovery, because empirical description as required in science must be precise and consistent with accumulated empirical data. However, the peoples who live around the mountain have traditionally not been interested in the specific height of the mountain. For them, the mountain signifies the magnificence of God, on whom all life depends. The mountain is traditionally described as the abode of God. This view of the mountain as the most significant manifestation of the greatness of God would not be changed, even if empirical scientists found that the mountain were much higher or lower than is now known to be the case.

We can conclude, therefore, that although the empirical content of miracles can be subjected to modern scientific verification, a religious person may continue to believe in them in spite of the findings which may result from such verifications. Since religious views are a matter of faith and of value judgement, empirical evidence cannot nullify or authenticate them. To believe, or not to believe in miracles are options which each individual person must choose from, on the basis of considerations other than scientific evidence. Let me close by alluding to a remark made by a contemporary theologian and philosopher, Paul Tillich. He said that the greatest miracle is not that miracles happen,

but that anything happens at all. Thus the universe itself, and everything therein, is the greatest miracle of all. And I think that this is true.

CHAPTER SEVEN

BETWEEN SUBJECTIVITY AND OBJECTIVITY
A CRITIQUE OF EURO-HELLENIC EPISTEMOLOGY

Introduction:

In his book Religion and Science (London: Mills and Boon, 1964) Archbishop John Habgood has rightly cautioned advocates of any one approach to knowledge, against categorical condemnation of other approaches. He has observed that inspite of remarkable achievements in extending the frontiers of knowledge, empirical science and applied technology have opened up new challenges and raised new questions which remain without any definite answers. At the same time, in the social sciences and humanities new methods of research and analysis have been developed. Yet neither theology, nor philosophy, nor sociology ought to claim monopoly over solutions to the human quest for reliable knowledge.

More than two decades after publication of Habgood's book, his cautionary insights remain more valid than ever. It is necessary for experts to respect, appreciate and learn from one another, in the continuing search for a more comprehensive knowledge of reality. The problem, though, is that the Euro-Hellenic intellectual tradition has, for millenia, been characterised by piecemeal approaches to epistomological enquiry, and antagonism has been more common than co-operation. Perhaps Habgood's call could be enhanced by insights from other intellectual traditions, such as oriental and African ones.

The Problem of Ontology

Nearly two hundred years ago Immanuel Kant highlighted the difficulty of clearly determining, with certainty, the nature of reality-as-it-is. Our knowledge of reality is only through our perception. This perception is aided by sensations which we experience via the various organs of our bodies. The sensations are processed by our minds, to produce our knowledge of the reality outside of ourselves. If this view is correct, is there any possibility for human beings to know or experience reality-as-it-is? Apparently, there is no possibility, because we have no way of knowing when our sensations deceive us.

Reality as we know it, is configured by our imagination in response to our sensations. If we agree amongst ourselves about the "true" configuration of a particular aspect of reality, the agreement is only a consensus which may or may not correspond to the actual state of affairs. The true state of affairs pertaining to any part of reality, cannot be known with certainty, because we have no means of confirming the reliability of our senses absolutely.

The problem of ontology (of systematic articulation and categorization of the actualities in reality) is presented as the first concern in Hebrew thought. The first eleven chapters of the book of Genesis are an attempt to deal with ontology. Every word in Genesis 1:1 is weighty, because it presupposes a particular world-view even before the world has come into being. God exists before the world, which must have a beginning.

God provides the explanation for everything that has the quality of being, irrespective of its substantial, temporal and spatial relations. Of necessity, God is "beyond" and "above" all the temporal, spatial and substantial existence, otherwise the ontological formulation would collapse. But if God is "beyond" and "above" these relations, to what kind of reality does the word "God" refer? In his book The Logical Status of "God" (London: Macmillan, 1973). Michael Durrant has discussed this question, arriving at the conclusion that the word "God" has no specific logical status in grammar. Sometimes it is used as a proper noun, sometimes as a common noun, and at other times it appears in grammar as an adjective or an adverb. Are we to conclude, then, that theology is a discipline without a foundation?

Logical positivism, tried to by-pass theology, ethics and aesthetics through the principle of empirical verifiability. However, the validity of this school of thought depended on presuppositions which could not be empirically verified. Thus the existence of logical truths cannot be empirically verified even though it might appear that their claims cannot be denied without self contradiction.

For human beings, the problem of ontology seems so great that only a common-sense approach would satisfy the average seeker of truth. Fortunately, idealism is impossible without some experience of substance in relation to duration and space. The most definite affirmation we can state about reality without self-contradiction, is that our experience is an integral part of reality, irrespective of whether we can rationalize the experience or not. This affirmation would seem to go against the insightful suggestion by Descartes that human thought is the key to human self-awareness. Yet it would seem ridiculously false to claim that only those persons exist, who are aware of their own existence. Berkeley's idealism would be grossly misleading, because according to it every human being has to continue thinking of all his possessions at every moment, in order to sustain their existence. Should he forget any one item even for a moment, it would cease to exist.

No human being can list an exhaustive and comprehensive inventory of everything that exists. Yet we cannot logically claim that such an inventory does not exist because the term "universe" refers to everything that is the case. Theologically, we can use a codified expression, and suggest that only God can provide such an inventory.

The problem of Epistemology

It is the predicament of humankind that inspite of being sentient, human beings are not omniscient. They may "know" more than other creatures, but they do not, and cannot know everything that there is to know. Every religious tradition has within its lore, ways of inculcating this truth about the human condition. In the book of Genesis it is depicted in the story of the "Fall" of Adam and Eve, when they failed the epistemological test. They failed to accept the limits of their knowledge, and chose to defy the instructions which forbade them to eat the fruits of only one tree in the garden while they had the liberty to do anything else they might choose. The curiosity of the human species tempts human beings to venture to explore the unknown, even when there are risks of great failure.

Apparently, some oriental traditions (such as Buddhism) deal with this epistomological predicament by promising a procedure through which human beings might become omniscient. This is attained when one becomes fully "enlightened", and at that time one becomes absorbed and integrated into universal consciousness, which is the pool of all knowledge.

In the African heritage the individual does not have to go through so much trouble, because the epistemological quest is considered lighter and more enjoyable in the context of community. Europe since the Renaissance has tended to emphasize the role of the individual in espistemological enquiry, to the extent that individualism has become the basis of all knowledge. Every idea tends to be associated with a particular thinker. In such a context, it becomes a matter of importance, as to who first invented infinitesimal calculus - Isaac Newton or Leibnitz. Is it not likely, and possible, for both thinkers to have independently invented the idea?

In Christian theology, God is the source of all knowledge. Human beings become knowledgeable only to the extent that God inspires them to know. Revelation is the disclosure to human beings, of knowledge which is known in fullness only by God. Revelation and inspiration are important notions in Christian theology, because without them it appears that human beings would remain without knowledge.

This approach to epistemology is under fire when confronted by modern science and technology. Is knowledge which is gained through research, trial and error, experimentation and observation to be regarded as revealed knowledge? Are Nobel Prize winners to be regarded as heralds of God's wisdom? George Bernard Shaw suggested that Genius is ninety nine percent perspiration and one percent inspiration. What exactly is genius?

In the New Testament it is reported that from the age of twelve onwards, Jesus grew in wisdom and in stature. What does this mean? If knowledge can be accumulated with age, can human worth also be accumulated in the same way?

These questions may appear trivial at first sight. But they are crucial questions when dealing with the problem of human knowledge, and they are of central importance when we engage in discourse concerning the relationships between God, humanity and nature.

The Problem of Axiology

Axiology is the systematic study of values and value judgements. This label is more general and inclusive than ethics or moral philosophy. Values and value judgements are often presupposed in discourse and it is only in mathematical and symbolic logic that a key is provided for the interpretation of the arguments. Without the key, an argument expressed in symbolic logic might not make sense.

The laws of physics also state the conditions within which the phenomena would be observed - especially the environmental factors such as temperature and pressure.

How do human beings establish their values? Are values divinely given or are they products of convention? Take such values as justice, peace,

participation and integrity. In ecumenical discussion, these values have been accorded positive axiological rating. What is the basis of selecting these values, rather than others? In his book Situation Ethics (London: SCM Press 1967) Joseph Fletcher presented an approach to Christian ethics which placed emphasis on the principle of love and relativised all other values and actions against love as the standard. This approach was based on the emphasis by Jesus, that the greatest commandment is to love God with one's whole being, and the neighbour as oneself. Is this approach universally applicable and acceptable? Michael Keeling, in What is Right (London: SCM 1968) showed that the implementation of that approach in real life could be quite problematic. With regard to the Vietnam war, for example, what would be the right course of action, even on the basis of the principle of love? In many cases, there are more than two parties involved and one has to take account of all perspectives.

Christian theologies of liberation have emphasised that where there are conflicts of interest, the option should always be in favour of the disadvantaged and the victim. But then, in most cases the victim is so overwhelmed by his circumstances that the "oppressor" is on the opposite side as far as social status is concerned. How can reconciliation be achieved between an "oppressor" and his "victim", without a prior dismantling of this dialectical relationship? Can there be any genuine reconciliation between an "oppressor" and his "victim", without genuine freedom as a precondition? In the WCC Fifth Assembly (Nairobi, November-December 1975) consensus was expressed, that Jesus Christ provides the basis for both freedom and reconciliation, on the understanding that genuine freedom is logically prior to genuine reconciliation.

At the WCC Sixth Assembly (Vancouver, July-August 1983) the relationship between justice and peace was debated. Consensus emerged, that there can be no genuine peace without justice, because justice is part of the definition of peace. If peace is defined as the equilibrium of social forces in a particular historical context, it appears to be self-evident that any society without such an equilibrium cannot be said to be at peace. The endeavour to maintain a situation of disequilibrium will only increase institutional violence, which in turn will further destabilise the social relations instead of stabilising them.

The problem of axiology, as it relates to Christian theology, is to discern ways and means of understanding human relations, which would promote maximum peace - or reduce tensions to a minimum without suppressing the integrity of individuals and groups within the society in question. Science and technology can be engaged for such a goal, but more often than not, they are used for the opposite. Science and technology in the contemporary world, are used for the destabilization of society and of nature, owing to a value-system which degrades nature and humankind, while elevating the machines invented by the human genius - Kenneth Kaunda has written:

> I believe that the universe is basically good and that throughout it great forces are at work striving to bring about a greater unity of all living things. It is through co-operation with these forces that man will achieve all of which he is capable. Those people who are dependent upon and live in closest relationship with nature are most conscious of the operation of these forces: the pulse of their lives

> beats in harmony with the pulse of the universe. They may be simple and unlettered people and their physical horizons may be strictly limited, yet I believe they inhabit a larger world than the sophisticated Westerner who has magnified his physical senses through invented gadgets at the price, all too often, of cutting out the dimension of the spiritual (K. Kaunda, A Humanist in Africa, London: Longman, 1966, pp.22-23).

Two hundred years earlier, Oliver Goldsmith (1728-1774) lamented the destruction of rural Britain by the process of industrialization and urbanization. In his memorable poem: The Deserted Village he wrote:

> Even now the devastation is begun,
> And half the business of destruction done;
> Even now, me thinks, as pondering here I stand,
> I see the rural virtues leave the land.
> (M.E. Speake, ed., The Pocket Book of Verse,
> New York: Pocket Book, 1940, pp.71-83).

Are the processes of industrialization, urbanisation and secularisation inevitable? Are they necessary for the survival of the human race? It appears that these processes, so far, have tended more towards destruction than construction. Could there be a re-orientation of values so that science and technology might promote human welfare without ecological and social destruction? This is one of the axiological challenges which Christian theology ought to face today.

The Problem of Technology

Generally and broadly, we can define technology as organized knowledge concerning tools - how to research, design, manufacture, install, operate, diffuse, distribute, maintain, replace and improve. Thus the actual machines produced by a particular technology, constitute a relatively small proportion of the entire technology. Moreover, the social milieu within which a technology is evolved is an integral part of that technology itself. The technique, the social context, and the creative contributions of the inventors and innovators, together constitute the bulk of technology. It is widely estimated that more than sixty percent of the total cost of computers is taken up by the software. Another significant part of the cost goes to the "brainware" to pay the inventors and innovators who keep the industry going. Thus the hardware cost is considerably low in comparison with that of other components of the whole technology. These observations call for a re-definition of technology, so that the hardware is appreciated in its proper, miniature perspective.

It has become customary for textbooks on cultural anthropology and archaeology to define humankind as the tool-maker. In support of this definition, tools for hunting and gathering are displayed and explained. It is suggested that the hominids evolve to homo sapiens when they learn to make material tools. Our remarks concerning the nature of technology lead us consistently to consider a more basic achievement of the homo sapiens, without which the manufacture of material tools would be impossible. The development of language is the first technological achievement of humankind. It is this basic achievement, which makes culture possible. Thus language itself would be best understood as

technology, which facilitates the development of other technologies within a particular historical context. The story of the tower of Babel is a mythical commentary on the role of language as the foundation of all other technologies (Genesis 11: 1-9).

Paradoxically, the "development" of linguistic technology has not been matched by a corresponding improvement in the quality of other technologies. For instance, the invention of writing may have helped to preserve records, but at the same time it limited the scope for human inventiveness. Tradition came to be regulated by the "letter" of law, rather than by the "spirit" of law.

Marshall McLuhan controversially argued that the invention of printing was not necessarily a positive technological achievement, because it devalued the oral medium while promoting written communication. At the same time, the written form of language was a reduction of the oral form, which was culturally richer and more comprehensive. McLuhan hoped that the electronic video medium (through television and film) would restore the lost impact of oral linguistic technology. However, the electronic medium has had the effect of further alienating man from himself, as a result of manipulation of that medium by those who own and control it. (For critical views on McLuhan, see Raymond Rosenthal, ed., McLuhan Pro and Con, Pengiun Books, 1969)

If language is the basic technology upon which all other technologies depend, it follows that a re-orientation of science and technology cannot occur without re-orientating the function of language in the latter two concerns. A breakdown in linguistic communication will almost certainly lead to technological disaster, as happened with the tower of Babel. But how can such a linguistic breakdown be prevented?

Ludwig Wittgenstein addressed himself to this question. In his later work (for example in Philosophical Investigations) he showed that as a tool, language can only do the tasks we assign for it. If language is used for destruction, it will destroy. If it is used for re-construction and reconciliation, it will reconstruct and reconcile. It is logical to suggest that Christian theology as a linguistic exercise, ought to be engaged for re-construction and reconciliation, in order to pave the way for the re-orientation of science and technology.

Theology: Between Objectivity and Subjectivity

Since the rise of logical positivism in the 1920s, there has been a tendency in Euro-American philosophy to distinguish between facts and values, promoting the former while demoting the latter. According to this tendency, facts are reliable because they are claimed to be objectively derived, whereas values are supposed to be subjective attitudes. On the basis of these claims most logical positivists would promote empirical science as reliable knowledge, and write of theology, ethics and aesthetics as pseudo-knowledge.

It is important to emphasize that no knowledge claims are value-free. This we have already noted in our comments about the problems of axiology and epistemology. Facts are identified and recognized as facts on the basis of criteria which may or may not be explicitly stated. These criteria are much more important than the facts themselves, because they

have to do with the basic value-system which determines a person's epistemological interests.

At the same time, values are not entirely subjective. For example, an admission of the limitations of human personality in substance, duration and space, is at the same time to state a fact about our predicament as human beings. Each human individual has a physical body with a specific mass at a particular time; and is limited in duration and space. No normal human being can be physically in two places simultaneously. These limitations compel us to respond to reality in such a way as to compensate for them.

Theology is one of those disciplines which endeavours to cope with these limitations. God transcends all the limitations of humankind and because of this, human beings can entrust themselves to God's care and providence. Theology need not apologise to other disciplines for offering this perspective because its role cannot be exhaustively fulfilled by any other approach.

There is always a two-way conceptual movement between facts and values, both consciously and sub-consciously. Although theologians may be primarily interested in questions of values, they cannot engage in theological discourse without reference to some basic facts. Likewise, natural scientists may be primarily interested in facts, but the supposed objectivity or "neutrality" of facts is possible only when some basic assumptions are taken for granted without question.

Archbishop John Habgood has aptly expressed this insight succinctly as follows:

> No matter how much Christians may stress the objective, historical aspects of their faith, and claim that their faith is the faith of an historical community, there remains a large personal element in it. To know God is not to add an extra card labelled "God" to our mental card index; it is to become a changed person. To a lesser degree, to learn science is to become a changed person also. But whereas in science the process of change is largely unconscious and often unrecognized, in religion it is paramount. (Religion and Science, p. 132).

These remarks lead us to conclude that the various disciplines through which we endeavour to comprehend ourselves and the reality around us, will serve us best if we appreciate them as complementary parts of a very complex jigsaw puzzle, of which we ourselves are an integral part. Theology cannot dispense with the empirical sciences without empairing its objectives. Nor can science and technology dispense with theological insights without losing direction. Unfortunately, they seem to have already lost their bearings, and they may have to count on theological insights for a new orientation. This re-orientation will need the contribution of those cultural and religious traditions which have so far been considered marginal, despite their being deeply human.

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